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Spirituality, HIV and Black/African American Women

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Walden University
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Abstract

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Dissertation Submitted in Partial Fulfillment

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Abstract

Despite the surmounting prevalence of human immunodeficiency virus (HIV) among Black women, few studies have been conducted to examine culturally appropriate prevention methods to reduce the occurrence of the disease. The purpose of this cross-sectional study was to explore how religion/spirituality affects the attitudes, beliefs, and self-perceptions of HIV/AIDS among 151 Black/African women, ages 25-44, in Florida, and to investigate the impact of HIV-related stigma on the attitudes, beliefs, and self-perceptions of HIV/AIDS within this population. Social cognitive theory was the framework of the study. Multiple linear regression and hierarchical regression were used to analyze the survey data. Results revealed that daily prayer was related to above average attitudes about HIV/AIDS. There was no statistically significant relationship between church attendance and daily prayers with risk perception. Participants with higher self-efficacy were less likely to show attitude above average, and self-efficacy did not mediate the relationship between church attendance and daily prayer and risk perception. Study results illustrate that church activities are significantly related to the ability for self-regulation and demonstrate how spiritual/religious practices influence attitudes, beliefs, self-perceptions, and self-efficacy related to how HIV is acquired. These findings can promote social change by bridging the gap in the collaboration efforts of public health practitioners and the Black community, assisting in the development of interventions to address HIV in Black/African American women.

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Dedication

I would like to dedicate this study to my dad in heaven. You were so happy when I told you I was embarking on this journey, telling everyone in the family that your daughter was getting her PhD. There have been many times that I have wanted to give up, but I kept hearing your voice saying, “I am so proud of you! You can do this, Pumpkin.” So, I have pressed on. It has taken longer than I expected, but I am finally here. To my son, Shamori, thank you for listening to me rant about this being the hardest thing I have ever done. Son, you have no idea what your words of encouragement have meant to me. Mom, you have been more than a staple in my entire life. Thank you so much for lending your ear, your money, and your heartfelt prayers. To my brothers, thank you for believing in me and bragging about me from time to time on Facebook, Instagram, and Snapchat—those posts gave me the energy to write one more paragraph when I felt so exhausted. To my husband, Garvens, thank you for being so understanding and prayerful during this very important time in my life. To my friends, coworkers, and other family members, thank you for your kind words of encouragement, which inspired me to keep moving forward.

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Chapter 1: Introduction to the Study

Introduction

Human immunodeficiency virus (HIV) emerged in the early 1980s, challenging the widely held belief that infectious diseases were under control (U.S. Department of Health and Human Services, 2019). Although the estimated incidence of HIV has decreased in the United States over the past decades, well-known risk factors for HIV do not entirely explain why Black/African American women continue to acquire HIV at alarming rates (Ludema et al., 2015; U.S. Department of Health and Human Services, 2019). The Black/African American church is the foundation in the Black/African American community and has been used for health promotion purposes (Ludema et al., 2015). The church, however, has not been as successful at preventing HIV among Black/African American women because the strategies currently used are not grounded in their personal spiritual beliefs or practices (Krishnaratne et al., 2016; Ludema et al., 2015; Roman Isler et al., 2014). Little attention has been paid to the relationship of spirituality/religiosity in Black/African American women and the behaviors that may put them at risk for contracting HIV. In this study, I examined the association of HIV and spiritual/religious practices on attitudes, beliefs, and self-perception so that future interventions aimed at preventing HIV in this population can incorporate faith and culture (Nunn et al., 2012; Roman Isler et al., 2014; Runnels et al., 2018). In this chapter, I discuss the background, problem statement, purpose statement, research questions, theoretical framework, nature of the study, definitions, assumptions, scope and delimitation, limitations, and significance of the study.

Background of the Study

HIV, a retrovirus that targets the immune system, rapidly evolved and spread over the entire world within a decade (U.S. Department of Health and Human Services , 2019). Initially, HIV was thought to be a disease that only infected White gay men; however, since the turn of the 21st century, 1.2 million people living in the United States have tested positive for HIV, and almost 1 in 8 are unaware of their infection (U.S. Department of Health and Human Services, 2019). Although the estimated incidence of HIV has decreased in the United States, in 2017 the Centers for Disease Control and Prevention (CDC, 2018) reported that among women of various ethnic backgrounds, Black/African American women represented 59% of all new HIV infections. The literature has suggested that risk behaviors that have been historically associated with an increased risk of acquiring HIV, such as drug use, lack of condom use, and an increased number of sexual partners in a lifetime do not entirely explain why Black/African American women are acquiring HIV at higher rates (Ludema et al., 2015). Krishnaratne et al. (2016) found that common behavioral interventions such as condom use and participation in risk-reduction programs have failed to reduce HIV in this population because the interventions are neither socially or culturally appropriate nor are they personalized to the needs of Black/African American women.

Approximately 76% of Black/African American women pray and 88% believe that God exists, and their decisions are often guided by their relationship with God (Nunn et al., 2012). The Black/African American church is the foundation in the Black/African American community and has been used in recent years for health promotion purposes

and as a venue to address social, economic, and individual issues faced in the Black/African American community (Ludema et al., 2015). Despite their unique position, the few Black/African American churches that have attempted to address HIV have not been successful due to financial and time restraints, concerns with discussing how HIV is acquired, HIV's association with homosexuality and promiscuity, difficulty with discussing sexuality, lack of understanding of HIV, and because the interventions are often not grounded in their spiritual beliefs and/or practices (Ludema et al., 2015; Roman Isler et al., 2014).

Problem Statement

Every 35 minutes, a Black woman is told she is positive for HIV in the United States, yet there are tools and resources to educate women on HIV prevention (Black Women's Health Imperative, 2019). The general problem investigated in this study was the gap in knowledge associated with the development of interventions that are effective at preventing HIV among Black/African American women. More specifically, I investigated the factors associated with the relatively high rate at which Black/African American women acquire HIV with a focus on faith-based and culturally appropriate prevention programs (Runnels et al., 2018; U.S. Department of Health and Human Services, 2019).

The CDC (2019) has estimated that the rate of new HIV infections among Black/African American women is 15 times higher than that of White women, and more than three times higher in Latin American women. Moreover, 66% of new HIV infection cases nationally are found in Black/African American women, with the harsh reality that

1 in 30 Black/African American women will be diagnosed with HIV at some point in her life (Black Women's Health Imperative, 2019). Despite public health efforts, common behavioral interventions, such as condom use and participation in risk-reduction programs, have failed to reduce HIV in this population because the interventions are neither socially or culturally appropriate nor are they tailored to the needs of Black/African American women (Krishnaratne et al., 2016).

Studies have highlighted the strong roles financial insecurity, stigma, health education, and disease perceptions have on HIV prevalence among Black women (Darlington & Hutson, 2016; Frew et al., 2016; Sangaramoorthy et al., 2017). Stigma, for example, is rooted in conservative views regarding how HIV is transmitted and could negatively affect HIV prevention and treatment adherence (Cuca et al., 2017). Further, some Black women fear being labeled as promiscuous if they seek health services related to HIV prevention (Chandler, 2016). Other factors like gender, education, quality of life, obtaining needed care, and trust in healthcare services providers are also related to HIV stigma (Jang & Bakken, 2017). These factors are prevalent in southern states like Florida, where the incidence rate of HIV among Black women continues to rise (AIDSVu, 2019; Darlington & Hutson, 2016; Florida Department of Health, 2019).

According to the Pew Research Center (2019), African Americans are most likely to believe in God, be religious, and attend church regularly among other races/ethnicities in the United States. Thus, there is an opportunity to develop HIV prevention programs grounded on how religious/spiritual practices and self-efficacy affect attitudes, beliefs, and perceptions of HIV transmission, yet little is known about these relationships

(Hutson et al., 2018; Ironson et al., 2011). Understanding these relationships will assist public health by laying the groundwork for the development of culturally appropriate HIV interventions for Black women living in the South (Darlington & Hutson, 2016). Although there have been numerous HIV prevention studies conducted and interventions developed, a gap remains in the literature about how spirituality and religiosity shape the beliefs, attitudes, perceptions, and realities of HIV among Black/African American women (Black Women's Health Imperative, 2019).

Purpose Statement

The historical importance of religion/spirituality practices or beliefs in the lives of Black/African American women can be traced from slavery to freedom (Carter, 2002). Religion/spirituality has always been an essential part of Black communities' sociocultural systems but has often been neglected by public health professionals as they have attempted to identify and understand certain health behaviors within the Black/African American community (Litwinczuk & Groh, 2007). Though HIV-related stigmatization has been linked to diminishing the efforts of HIV prevention in Black/African American women, little research has been conducted regarding how HIV-related stigma affects religious/spiritual practices in relation to HIV prevention (Williams et al., 2014).

Despite the significant role religion/spirituality plays in the lives of Black/African Americans, some Black churches have unintentionally contributed to the stigma felt by Black women living with HIV and acquired immunodeficiency syndrome (AIDS) and those who may be at risk (Williams et al., 2014). For example, a study involving Black

clergy was conducted early in the second decade of the epidemic, revealing that 79% of the sermons preached against premarital sex and/or included a firm opposition to homosexual practices; many of the clergy indicated believing that being infected with HIV/AIDS was a curse from God (Hatcher et al., 2008).

Nearly a decade later, a similar study was conducted surveying ministers and researchers found that HIV/AIDS was among the top health issues that the Black church should be involved in (Hatcher et al., 2008). Several inherent factors within Black churches and the religious doctrine, however, challenge many of the tenets of HIV health promotion used in nonspiritual settings (Hatcher et al., 2008). Therefore, the purpose of this study was to explore how religion/spirituality affects the attitudes, beliefs, and self-perceptions of HIV/AIDS among Black/African women and to explore the relationship HIV-related stigma has on the women's attitudes, beliefs, and self-perceptions of HIV/AIDS.

Research Questions

RQ1: To what extent do religious/spiritual activities, defined as regular church attendance and daily prayers, have an impact on the attitudes and beliefs of how HIV/AIDS is acquired among Black/African American women, ages 25–44, living in a southers city, as measured by the Texas Christian University (TCU) HIV/AIDS risk assessment scale?

$H_0$1: Religious/spiritual activities, defined as regular church attendance and daily prayers, do not have an impact on the attitudes and beliefs of how HIV/AIDS is

acquired as measured by the TCU HIV/AIDS risk assessment scale among Black/African American women, ages 25–44, living in a southern city.

H_a1: Religious/spiritual activities, defined as regular church attendance and daily prayers, do have an impact on the attitude and belief of how HIV/AIDS is acquired among Black/African American women, ages 25–44, living in a southern city.

RQ2: To what extent do religious/spiritual activities, defined as regular church attendance and daily prayers, have an impact on the perceptions of HIV/AIDS acquisition among Black/African American women, ages 25–44, living in a southern city, as measured by the Perceived Risk of HIV Scale?

$H_0 2$: Religious/spiritual activities, defined as regular church attendance and daily prayers, do not have an impact on the perceptions of how HIV/AIDS is acquired as measured by the Perceived Risk of HIV Scale among Black/African American women, ages 25–44, living in a southern city.

$H_a 2$: Religious/spiritual activities, defined as regular church attendance and daily prayers, do have an impact on the perceptions of how HIV/AIDS is acquired among Black/African American women, ages 25–44, living in a southern city.

RQ3: Does self-efficacy mediate the relationship between church attendance, daily prayers, and attitudes and beliefs of how HIV/AIDS is acquired among Black/African American women, ages 25–44, living in a southern city, as measured by the self-efficacy scale for HIV risk behaviors?

$H_0$3: Self-efficacy does not mediate the relationship between church attendance, daily prayers, and attitudes and beliefs of how HIV/AIDS is acquired among Black/African American women, ages 25–44, living in a southern city, as measured by the self-efficacy scale for HIV risk behaviors.

H_a3: Self-efficacy does mediate the relationship between church attendance, daily prayers, and attitudes and beliefs of how HIV/AIDS is acquired among Black/African American women, ages 25–44, living in a southern city, as measured by the self-efficacy scale for HIV risk behaviors.

RQ4: Does self-efficacy mediate the relationship between church attendance, daily prayers, and risk perceptions of how HIV/AIDS is acquired among Black/African American women, ages 25–44, living in a southern city, as measured by the self-efficacy scale for HIV risk behaviors?

$H_0$4: Self-efficacy does not mediate the relationship between church attendance, daily prayers, and risk perceptions of how HIV/AIDS is acquired among Black/African American women, ages 25–44, living in a southern city, as measured by the self-efficacy scale for HIV risk behaviors.

H_a4: Self-efficacy does mediate the relationship between church attendance, daily prayers, and risk perception of how HIV/AIDS is acquired among Black/African American women, ages 25–44, living in a southern city, as measured by the self-efficacy scale for HIV risk behaviors.

Theoretical Framework

The variables of interest were examined within the framework of social cognitive theory (SCT), which defines human behavior as an interaction of personal factors, behaviors, and the environment (Bandura, 1977). SCT explains that individuals are influenced and can influence others through personal opinions, beliefs, behavior, advice, and support, which in turn influences their health choices and that of others. This may provide a theoretical explanation for why certain populations are at an increased risk of being infected with HIV (Fertman & Allensworth, 2010).

Researchers have used a variety of theories to explain or better understand physical, biological, and interpersonal phenomena occurring within an individual, a community, or a population so that the appropriate programs and interventions can be developed to address the phenomena (Kim, 2010). To properly address the HIV epidemic among Black/African American women, however, there must first be an understanding that behaviors are often influenced by personal beliefs of being susceptible to the infection and the personal and social context that might influence the behavior change needed to reduce their risk (Kim, 2010). Therefore, I sought to identify a theory that would aid in answering this study's research questions. Mallory et al. (2009) used SCT to provide a loose framework for the development of a focused group and interview guides. Although the study was qualitative in nature, the researchers demonstrated how SCT could be applied to addressing the HIV epidemic among Black/African American women by allowing the concepts within the theory to shape the questions asked during the focus group to determine what individual, social, and cultural factors were increasing women's

risky behaviors and protective practices related to HIV (Mallory et al., 2009). In addition, while the women in the study clearly understood the risk factors for HIV, the context for sexual risk taking and protective practices were poorly understood, which could be in part due to personal beliefs and social and cultural influences (Mallory et al., 2009). There is a further need for public health professionals to use the concepts within the SCT to support the importance of involving faith-based organizations in the development of interventions and programs that will be successful in reducing the incidence of HIV.

Bandura's (1977) three concepts also directly aligned with the variables of the current study. For example, personal determinants, including cognitive and affective factors, align with the variables of attitude, belief, and perception. The first concept (personal determinants) in Bandura's SCT is intended to be informational—that is, to increase the knowledge and the individual awareness of health (HIV) risk (Bandura, 1994). The second concept is behavior, which also aligns with the variables of attitude, belief, and perception. With this concept, Bandura indicated that a person's behavior, which is guided by their attitudes, beliefs, and perceptions, is important to the self-regulative skills and social skills needed to translate their concerns into preventive action needed to protect themselves from HIV (Bandura, 1994). Self-efficacy, a third component in Bandura's SCT, and a variable in the current study, is concerned with an individual's belief that they can exercise control over their own emotions, motivations, thought process, and their patterns of behavior that may or may not increase their risk of being infected with HIV (Bandura, 1990). In psychological research, perceived self-efficacy is described as one's ability to apply control over their motivation, behavior, and

social environment (Bandura, 1990). The construct of perceived self-efficacy for this study was defined as one's personal belief in their capability to exert control or motivation over their patterns of behaviors, thoughts, emotional states, and their surroundings (Bandura, 1994).

Nature of the Study

A cross-sectional quantitative research design was used in this study. The cross-sectional design was selected because it allowed me to obtain data on the attitudes, beliefs, perceptions, and self-efficacy of how HIV/AIDS is acquired among Black/African American women, ages 25–44, living in a southern city. Because this study was cross-sectional, I was not able to infer causality because both the risk factors and outcomes are collected at the same point in time (Lee, 1994). The information obtained, however, serves as a barometer of the association of interest (Lee, 1994).

The Leon County Health Department and Bond Health Department located in a southern city, were solicited for their help to collect data utilizing prevalidated questionnaire. However, because of COVID 19, the questionnaire was placed on survey monkey.

Definition of Terms

Acquired immunodeficiency syndrome (AIDS): The last stage of HIV infection, diagnosed when an individual's cluster of differentiation 4 (CD4) count drops below 200, resulting in the loss of immune system protection (CDC, 2012).

Beliefs/attitudes: An individual's beliefs, feelings, or disposition of how HIV is acquired. Beliefs and attitudes were measured by the TCU HIV risk assessment scale (Simpson et al.,1994).

Black/African American women: Any woman between the ages of 25 and 44 who identifies as a Black or African American woman born in the United States.

Human immunodeficiency virus (HIV): A virus that attacks the immune system, destroying White blood cells (CDC, 2012).

Perceptions: How an individual thinks about their risk of being infected with HIV, measured by the perceived risk of HIV scale.

Religious/spiritual practices: Activities that include regular church attendance and daily prayers. In this study, these were measured by the centrality of religiosity scale (Huber, 2012).

Self-efficacy: An individual's belief that they can motivate themselves and regulate their own behavior to perform a specific behavior under specified conditions (Bandura, 1994).

Assumptions

All researchers make assumptions when conducting studies. Assuming the sample is representative of the population and the instruments used are valid and will measure the desired constructs are some of the most common assumptions (Nachmias-Frankfort & Nachmias, 2008). Assumptions in this study included the following: (a) all participants had basic knowledge of HIV/AIDS (transmission), (b) all participants practiced some form of religious/spiritual practices, and (c) all participants truthfully and accurately

completed the surveys with regards to their perceptions, beliefs, and attitudes of how HIV/AIDS is acquired.

Scope and Delimitations

The well-being of all Black/African American women requires interventions and educational messages regarding HIV prevention that are personally tailored to them. Although I did not address the interventions or the educational messages that should be developed to reach this high-risk population, the current study contributes to understanding of the beliefs of Black/African American women and the role religious/spiritual practices play in influencing their behaviors associated with acquiring HIV, which can contribute to the development of interventions that are more appropriate for this population. Therefore, the scope of this study was specifically limited to Black/African American women who live in a particular southern city and are between the ages of 25 and 44.

Limitations

Internal Validity

Because this was a nonexperimental quantitative study that used a convenience sample without random selection, the robustness of the study may be questioned (Creswell, 2009). Selection bias could potentially be another limitation to this study because only Black/African American women between the ages 25 and 44 were selected to participate, potentially producing an inaccurate conclusion about Blacks/African Americans in general. Recall bias could also be a limitation because the participants had to recall behaviors that occurred within the last 12 months and may have had a hard time

remembering what their thoughts were during their sexual encounter (Creswell, 2009). Therefore, the scores of the participants may be altered based on their inability to recall what behaviors or beliefs influenced their actions to practice behaviors that decrease their risk of being infected with HIV (Creswell, 2009).

External Validity

The generalizability of this study may be a concern because the study targeted Black/African American women, ages 25–44, in a southern city. According to the CDC (2009), Black/African American women between the ages of 25 and 44 are leading the numbers of HIV infections and AIDS-related deaths. Therefore, targeting Black/African American between these ages living in a southern city brings great significance to this study because Florida ranks number three among states with the highest HIV/AIDS rates (CDC, 2011a).

Significance

As evidenced by the data, Black/African American women are still disproportionately affected by HIV despite the many studies that have been conducted to better understand their HIV risk, their HIV health literacy, and their ability to engage in conversations about HIV (Davis, 2014). Additionally, several studies have been conducted on the role the Black church has or should have in promoting HIV awareness, HIV/AIDS prevention, and behavioral change (Davis, 2014; Szaflarski, 2013). In this study, however, I did not examine the role of the church and its religious doctrine on how it may influence HIV attitudes, beliefs, self-perceptions, and self-efficacy regarding how HIV/AIDS is acquired.

Numerous studies have been conducted to explain the impact spirituality and religion have on people living with HIV (PLWH_, but little research has been conducted to explore how spirituality/religiosity of Black/African American women influence attitudes, beliefs, self-perceptions, and self-efficacy regarding how HIV/AIDS is acquired (Szaflarski, 2013). For example, Szaflarski found that PLWH who are regularly involved in spiritual and religious activities have a better quality of life and can cope with stressors, such as stigma and discrimination, more effectively. Szaflarski concluded that there is a need for more research to be conducted with a focus on vulnerable populations with the development of interventions that are population-specific but are on the individual and community level. Hutson et al. (2018) found that women reported higher levels of religious well-being compared to men and that there was no significant correlation between stigma and being religious. The researchers concluded, however, that their findings supported the importance of defining spirituality and differentiating between cultural religious practices and personal beliefs (Hutson et al., 2018).

Although it is evident that community engagement is needed to design and implement sustainable public health programs to address HIV in Black/African American women, there is increasing interest among researchers, public health officials, and general medical clinicians on the role of spirituality/religiosity on the HIV epidemic (Szaflarski, 2013). There is a gap in the literature regarding how Black/African American women use spirituality/religious practices to influence their attitudes, beliefs, self-perceptions, and self-efficacy regarding how HIV is acquired. Hence, the significance of this study was to examine the individual views of Black/African American women on how their

spiritual/religious practices influence their attitudes, beliefs, self-perceptions, and self-efficacy regarding how HIV is acquired, which may be beneficial to public health practitioners, educators, public health funding agencies, and program developers as they develop interventions to address HIV in Black/African American women and bridge the gap in the collaboration efforts between public health and the Black community.

Nevertheless, the findings of this study not only add to the current body of literature on HIV/AIDS but also help to guide the development of the most appropriate interventions for HIV prevention among Black/African American women. Furthermore, based on the results of this study, there are implications for positive social change as I was able to shed light on the importance of understanding the need to develop HIV prevention interventions that are gender appropriate and ethnically and culturally appropriate, keeping in mind that other factors should be considered when a certain population is being disproportionately affected by a preventable health issue.

Summary

After a preliminary review of the literature, there is evidence that a gap exists in the literature in relation to the possible effects religious/spiritual practices and self-efficacy have on the attitudes, beliefs, and perceptions regarding how HIV is acquired and how knowledge of this information could aid in the development of culturally appropriate HIV prevention efforts. In previous studies, researchers have examined the role of the Black/African American church in HIV prevention efforts on a large scale but did not focus on Black/African American women's personal attitudes, beliefs, and perceptions of being infected with HIV and what factors may influence those beliefs.

Therefore, a need exists for studies that specifically focus on how spiritual/religious practices influence the attitudes, beliefs, and self-perceptions of Black/African American women regarding the acquisition of HIV and how those beliefs affect their desire to practice behaviors that protect them from being infected.

Studies of this nature not only add to the current body of literature but also allow researchers to suggest to public health professionals that an in-depth look into the religious/spiritual practices of these women is warranted in the development of effective HIV prevention efforts that are culturally appropriate. Based on the results from this study, I was able to recommend what type of HIV prevention programs should be collaboratively developed between Black/African American churches, public health practitioners, and the Black/African American community. The results of this study may help to provide insight into the attitudes, beliefs, and perceptions regarding HIV and how religious/spiritual practices could influence behaviors that reduce HIV infection, and with knowledge of these behaviors, effective HIV prevention programs could be produced as a result.

In Chapter 2, I review the existing literature on SCT and how it has been used in HIV research, the association between religion and HIV prevention, and the implications of the role religious/spiritual practices can have on HIV prevention measures. In Chapter 3, I provide the rationale for the methodology used, the data collection methods, and the data analysis. A summary of the results will be provided in Chapter 4. Lastly, Chapter 5 includes a summary of the study and the conclusions about the findings and how the results from the study can impact society.

Chapter 2: Review of Relevant Literature

Introduction

In this chapter, I present previous research relevant to this study, especially directly related to the research gap, which is the need to build further knowledge about how spirituality and religiosity, as well as HIV stigma, shape the beliefs, attitudes, and perceptions of Black/African American women. To address this topic, it is first important to consider the extent and underlying socioeconomic causes of the problem of extreme racial, demographic, and geographic disparity in HIV prevalence in the United States, which has led Black women in the Deep South (states of Georgia, Alabama, Mississippi, Louisiana, North Carolina, and South Carolina) to be one of the populations most at risk for HIV infection (Breskin et al., 2017).

Although African Americans comprise only 13% of the U.S. population, they accounted for 59% of all new HIV infections in women in 2018, and this racial disparity is expected to continue (CDC, 2018; Fletcher et al., 2016; Wiewel et al., 2016). African American women from a variety of socioeconomic backgrounds and life stages may misperceive their HIV risk as low-to-none, when it may be moderate-to-high, even among college-educated and/or middle class women, placing them at an even higher risk (Edwards et al., 2017; Heath, 2016; Newsome et al., 2017). Although certain studies have highlighted the risk for Black women in non-southern cities like Chicago (Newsome et al., 2017), overall, Black women in the Deep South are at the highest risk for HIV infection (Breskin et al., 2017). The counties with the highest female HIV prevalence are not only mostly located in the Deep South but are also characterized specifically by

African American HIV prevalence, lower median income, higher poverty levels, and lower education (Breskin et al., 2017). As I discuss in the sections that follow, complex socioeconomic, social, cultural, and religious conditions converge to cause certain African American women to be at a particularly high risk for HIV infection.

This literature review will include information regarding the environmental and cultural factors that converge to lead to HIV infection in Black women in general, Black women in the South, and Black women in the Deep South. Given that in the current study I explored the impact of spirituality and religiosity, as well as HIV stigma, on the lived experiences of HIV-positive Black/African American women, in this literature review, I also consider the impacts of stigma, the Black church, and personal spirituality and religiosity on HIV experiences and outcomes in relevant populations.

Earlier researchers on relevant topics placed particular emphasis on the HIV and homosexuality stigma experiences and outcomes of African American men who have sex with men (MSM) in the South, especially regarding how the Black Church tended to cause poor HIV infection outcomes for these men due to homonegative religious norms (e.g., Quinn et al., 2016; Smallwood et al., 2017). Internalized homonegativity (IH) can lead to self-hatred that can cause sexual risk taking in African American MSM (Geter et al., 2016), which can be a crucial link in the chain that leads to HIV acquisition among African American women in the South if these men go on to have sex with a woman or infect a man who will. As this literature review illuminates, for both men and women in the South, the Black church plays an ambiguous role in HIV care, appearing to both facilitate and prevent HIV acquisition, as well as support and ostracize its HIV-positive

congregants due to the contradictory forces of anti-homosexuality and HIV stigma versus Christian fellowship and church support (e.g., Himelhoch & Njie-Carr, 2016; Quinn et al., 2016; Williams et al., 2016). Despite the evident overlap between the HIV situations of African American MSM and women in the South, the literature has not focused as much on the HIV-related stigma and religiosity-related inner experiences—including the beliefs, attitudes, and perceptions—of HIV-positive African American women and men, especially MSM.

Literature Search Strategy

The databases and authoritative websites used to identify studies for this literature review were EBSCOHost, JSTOR, Google Scholar, Cochrane Database of Systematic Reviews, CINAHL, MEDLINE, Sage, PubMed, the American Journal of Public Health, the FDPH website, and the CDC website. The key search terms used in various combinations include the following: *HIV demographics, HIV and perceptions, HIV and poverty, HIV and homelessness, HIV and spirituality/ religion, HIV in Black/African American woman, HIV/AIDS related stigma, HIV-associated risk behaviors, HIV personal belief, HIV/AIDS and healthcare, HIV perceptions, poverty and HIV/AIDS, HIV stigma, HIV and MSM and women, HIV risk behaviors, HIV in southern states, HIV and the Black church, HIV and self-efficacy, HIV and social determinants, and HIV car, unsafe sex, condom use,* and *social cognitive theory*. Using these keywords in combinations, relevant studies were generated from database searches, and those that were deemed relevant to the study were included in the literature review. Of the 63 sources used in this literature review, 56 were published in 2016-2019 (89%), and six

were published before 2016 (11%). Sources that were not recent were usually related to the theoretical framework, except in exceptional cases when research in a given area was lacking.

Theoretical Framework

The theoretical framework for this study was SCT, with an emphasis on the concept of self-efficacy, as outlined by Albert Bandura (1977, 1986, 1990, 1994). Considered by theorists to be a bridge between behavioral and cognitive learning theories, SCT provides a framework for understanding the relationship between a person, their environment, and their behavior (Bandura, 1986). The relationship between these three factors determines whether a given individual possesses self-efficacy, the particular theoretical focus of the current study. SCT is one of the most widely used models of STD transmission risk behaviors because its concept of self-efficacy provides a useful framework for understanding an individual's passive or active response—their behavior—toward the STD-related risks of their social environment (Bandura, 1994). Although HIV-associated environmental and cultural factors such as socioeconomic and educational disparity are widespread and largely beyond the control of African American women at risk, self-efficacy may help explain why some women respond more adaptively to these adverse circumstances (e.g., Burke-Miller, et al., 2016; Logie et al., 2016).

Bandura (1986) proposed that for an individual to consistently make good decisions under tough circumstances, they need something beyond mere self-regulatory skills, which led to the idea of self-efficacy. Defining self-efficacy as an individual's steady belief in their ability to exert control over their own behavior, environment, and

motivation, Bandura (1986) believed that the lack of this attribute explains why some people could not successfully manage challenging situations despite possessing adequate knowledge and skills. As would perhaps be expected, HIV-related public health efforts have historically been focused on educating the public about HIV transmission and, more recently in the case of African Americans, on providing additional HIV-related resources in churches (Williams et al., 2016; Wingood et al., 2019). Such a public health approach assumes that, given adequate knowledge and resources, individuals will take the necessary precautions to avoid HIV infection and transmission. Differences in self-efficacy—particularly sexual self-efficacy in women—may partly explain, however, why the racial disparity in HIV prevalence persists and is expected to continue for African American women (CDC, 2018; Fletcher et al., 2016; Wiewel et al., 2016).

In the context of HIV prevention, individuals may undergo a cognitive negotiation that is determined by their available resources—not only knowledge, but also self-efficacy—that results in a behavioral outcome to use or forego a condom (Bandura, 1994). Multiple studies relating to safe sex and/or HIV prevention in women have used sexual self-efficacy or safe-sex self-efficacy as an independent variable (Addoh et al., 2017; Collins et al., 2017; Kanekar, 2015). For example, Addoh et al. found that, in a sample of 157 predominantly White full-time students at a southern college, a greater degree of safe-sex self-efficacy was associated with increased odds of safe-sex practice. Furthermore, the authors also observed that there was a significant association between self-efficacy for partner disapproval (ability to use a condom despite partner disapproval) and safe-sex practice. Given that certain masculine norms in African American and

Hispanic men have predicted negative condom-related beliefs (Vincent et al., 2016), and minority college women in one sample perceived condoms as a male responsibility (McLaurin-Jones et al., 2016), an African American woman's safe-sex and partner disapproval self-efficacy may impact her frequency of safe-sex practice. Indeed, Kanekar (2015) found that, among 180 sexually active college students, self-efficacy accounted for 14.7% of variance in safe-sex practice. Bandura's (1977, 1986, 1990, 1994) social cognitive concept of self-efficacy may account for individual differences between HIV outcomes of African American women in similar environmental conditions. The current study adds to existing literature by examining whether self-efficacy mediates the relationship between religious and spiritual activities and the belief of how HIV/AIDS is acquired in African American women.

Review of the Relevant Literature

This literature review revealed the extent to which a problem like HIV prevalence in African American women in the South is a highly complex issue that consists of salient components on both the macrolevel of institutional racism, socioeconomic disparity, and Black culture and the microlevel of individual communities, sexual interactions, and personal characteristics. Despite the high topic specificity of the study (i.e., the lived experiences related to religiosity, spirituality, and stigma of a sample of Black women), the topic requires a foundation of the much broader overview of socioeconomic disparities rooted in a history of racial inequity stemming back to the legacy of American slavery in the Antebellum South (Prather et al., 2018). Although this literature review shifts from broader social disparities to population-specific concerns

regarding religious communities and personal beliefs, these structural issues cannot be overstated and addressing them holds promise as the most lasting and fundamental HIV prevention strategy (Baird & Walters, 2017).

The diverse but interrelated topics addressed in this literature review are (a) the socioeconomics of HIV outcomes, (b) HIV-related stigma, (c) sexual orientation in African American men, (d) African American sexual gender roles and HIV transmission to women, and (e) HIV-related resources and support in the Black church and beyond. Together, these topics illuminate the situation that underlies and predicts the HIV stigma and religiosity and spirituality-related inner experiences of the current study's sample of African American women.

Socioeconomics of HIV Outcomes

As the demographics of HIV prevalence have changed in recent years, shifting to a high concentration of HIV-positive Black women with low socioeconomic status (SES) in the deep south, it is clear that socioeconomic factors, reflected by the mere fact of one's zip code, increasingly govern who is at risk for HIV (Breskin et al., 2017; Burke-Miller et al., 2016; Wiewel et al., 2016). Although it is not appropriate to conclude that low SES directly leads to circumstances that cause HIV, this section explores the ways in which low SES in African Americans is associated with conditions, neighborhoods, and communities that lead to the sexual risk taking and lower immunity that facilitate widespread HIV acquisition and transmission (Burke-Miller et al., 2016; Frew et al., 2016; Joseph et al., 2018).

This section will also feature an analysis of the ways in which, even after a diagnosis of HIV, socioeconomic conditions continue to influence one's HIV outcome, including subjective wellbeing and social support, which appear to have broader implications for the health and longevity of HIV-positive individuals (Logie et al., 2016). By contrast, in a later section, this literature review includes the consideration of how positive religious and spiritual aspects of African American communities, such as church support and spiritual beliefs, appear to improve immunity health and longevity in the HIV-positive African American population (e.g., Ironson et al., 2011; Wagoner et al., 2016).

As a group, African American women have a median annual income of $36,735, which is significantly lower than women of other races, including $40,664 for Asian women and $60,338 for non-Hispanic White women (National Partnership for Women and Families, 2019). Whereas this median figure is for African American women in the United States as a whole, multiple studies in this literature review have noted particularly high rates of unemployment and poverty-level incomes in samples of African American women who were either HIV-positive or at risk for HIV infection (Himelhoch & Njie-Carr, 2016; Logie et al., 2016). Frew et al. (2016) found that, among 2,099 American women (88% Black) in four major U.S. cities living in HIV "hot spots," financial insecurity played a fundamental role in 80% of cases as the underlying cause of risk-taking behavior that could eventually lead to HIV infection.

Baird and Walters (2017) stressed that, whereas South Africa favors a structural approach to HIV prevention in women, such as targeting social determinants like poverty,

the United States favors a less progressive approach that targets individual behavior change. In doing so, according to Baird and Walters, the United States tends to implicitly "blame" women for their behavior rather than fully recognize that poverty is an important correlate of HIV infection. Any HIV prevention program, the authors concluded, should include poverty remediation measures (Baird & Walters, 2017). As is discussed below, poverty tends to be compounded with other disadvantages, most notably neighborhood disadvantage, in the studies featured in this literature review (Burke-Miller et al., 2016; Logie et al., 2016; Prather et al., 2018; Wiewel et al., 2016).

Poverty and unemployment in African American women tend to be compounded with a number of other stressful and adverse social determinants, especially neighborhood disadvantage, that maitake the form of residential segregation (Prather et al., 2018) and poor-quality environment, shown to cause psychological distress and lowered immunity (Burke-Miller et al., 2016). Burke-Miller et al. found that both racial segregation and poor-quality environment were significantly associated with an unhealthy <500 CD4 (white blood cell) count in HIV-positive urban women. In a snowball effect, a poor-quality environment can lead to psychological distress in African American women, which can spiral into depression, substance abuse, and eventual non-adherence to HIV treatment (Burke-Miller et al., 2016). Furthermore, higher neighborhood poverty is directly associated with higher HIV diagnosis rates per neighborhood, as found regarding the 6,184 new cases of HIV in New York diagnosed in 2010-2011, with a greater association identified among women (Wiewel et al., 2016). Thus, as these authors have illustrated, it is the socioeconomic conditions of the

neighborhood in which an at-risk or HIV-positive woman lives, and not merely individual poverty, that can lead to conditions that cause HIV in the uninfected and lead to poorer health and life expectancies for those who are already HIV-positive.

Logie et al. (2016) succinctly illustrated the disastrous chain reaction that can occur between phenomena such as food and housing insecurity, HIV infection, HIV-related stigma, racial discrimination, and poor well-being among HIV-positive Black women in Ontario, Canada. Among 1,026 HIV-positive African and Caribbean Black women in Ontario, Logie et al. noted an alarming rate of housing insecurity, an aspect of poverty that has been shown to directly increase depression and reduce social support in these women. Given that Burke-Miller et al. (2016) illustrated how depression was related to even graver negative outcomes for HIV-positive Black women, such as substance abuse and treatment non-adherence, it is safe to conclude that aspects of poverty both contribute to HIV acquisition and aggravate the challenges of HIV infection in Black women (Burke-Miller et al., 2016; Logie et al., 2016).

Notably, two of the issues Logie et al. (2016) noted that these women face—namely HIV-related stigma and the intersectionality of multiple forms of identity marginalization—are key topics in later sections of this literature review. As this section's discussion shifts from the overall issue—greater rates of poverty in Black women—to the specific socioeconomic repercussions of this issue in neighborhood disadvantage and housing insecurity, further repercussions include the health and overall well-being of this population (Burke-Miller et al., 2016; Logie et al., 2016; Wiewel et al., 2016). Moreover, these issues could be as serious as dangerously low White blood cell

count and treatment non-adherence in HIV-positive women (Burke-Miller et al., 2016). It is not surprising, then, that issues stemming from socioeconomic disparity would also be associated with other disadvantages, such as multiple marginalized identities (Logie et al., 2016) that may further contribute to issues of mental and physical health. As this literature review becomes increasingly specific, it is important to keep in mind that socioeconomic disparity and its accompanying disadvantages remains a background for many of the subsequent issues of HIV infection under discussion.

HIV-Related Stigma

The topics focused on in this section include the research that has addressed HIV-related stigma among African American women in the South. This discussion, however, also addresses a theme that becomes increasingly dominant in the literature review: the role that the Black Church plays in propagating HIV-related stigma. This section touches upon the next topic, which is sexual orientation in African American MSM, especially in the south, and the role the Black Church and Christianity play in propagating HIV-related stigma along with homonegative or antihomosexual attitudes towards that population (e.g., Smallwood et al., 2016, 2017; Quinn et al., 2016).

Unfortunately for HIV-positive and at-risk African Americans, HIV-related stigma tends to be a cultural reality for this population, one which can have far-ranging negative consequences like HIV silence and treatment avoidance, aggravating both HIV risk and the illness itself (Amutah-Onukagha et al., 2018). An individual faces stigma when they are in possession of “an attribute that is deeply discrediting,” which is HIV infection in this case, that reduces them culturally “from a whole and usual person to a

tainted, discounted one" in the eyes of others and themselves. Therefore, what a given culture stigmatizes against is relative (Berger et al., 2001).

Characteristics and Consequences of HIV-Related Stigma in Black Women

In a study by Davtyan et al. (2016) with a focus and population that are related to the current study, 10 African American and Hispanic HIV-positive women in Los Angeles were asked to document their lived experiences of HIV-related stigma through photography. Using a program called Photovoice, participants displayed shared experiences of the causes, settings, and consequences of HIV-related stigma. The authors found that the major causes of HIV-related stigma in society, according to these women, were a lack of proper education about HIV and its transmission and accompanying cultural myths.

Furthermore, stigma was notably experienced even or especially in healthcare settings, in which medical professionals exhibited inappropriate hesitance to touch the HIV-positive patient, at times even refusing treatment, even though, presumably, these professionals were thoroughly educated about HIV. Darlington and Hutson (2016), in their literature review of HIV-related stigma among women in the south, also found that the healthcare sector was one of two major arenas in which African American women experienced stigma. Furthermore, in their study of a more general sample of 292 urban PLWH, Jang and Bakken (2017) relatedly found that PLWH perceived their health care providers to have negative HIV beliefs. This repeated finding is notable and occurs often enough in different populations and samples to appear generalizable.

As is echoed in discussions of other studies (e.g., Fletcher et al., 2016), participants experienced HIV-related stigma in a number of life settings and domains, whether medical, social, or interpersonal (Darlington & Hutson, 2016; Davtyan et al., 2016). According to Davtyan et al. (2016), the major consequences of HIV-related stigma were depression, fear of intimate relationships, and nondisclosure of HIV status. An HIV diagnosis can become compounded by problems such as poverty, poor neighborhoods, and stigma to result in aggravated negative mental and physical health outcomes in HIV-positive minority women (Burke-Miller et al., 2016; Davtyan et al., 2016; Logie et al., 2016; Wiewel et al., 2016).

Fletcher et al. (2016) echoed the findings of Davtyan et al. (2016) regarding the lived experience of HIV-related stigma in minority and/or African American women, with a closer focus on the current study's population. Using in-depth individual interviews with 42 HIV-positive African American southern women, Fletcher et al. found that they shared the following major experiences: (a) experiencing HIV-related stigma in various contexts and multiple life domains, (b) stigma complicated their disclosure decisions, (c) stigma led to a felt lack of social support and safety in multiple settings (i.e., social, professional, medical), (d) this stigma was also felt in churches, and (e) participants were powerless to counter stigma due to multiple marginalized identities. A lack of social support and social safety (finding c), also reported earlier by Logie et al. (2016) in HIV-positive Black Canadian women, could in fact be associated with even greater experiences of stigma. In a study of 135 HIV-positive women in the Bay Area

(60% Black), Cuca et al. (2017) found that participants who felt less socially valued also felt greater stigma (Fletcher et al., 2016).

In the studies conducted by Fletcher et al. (2016) and Davtyan et al. (2016), a significant overlap in findings, qualitative methodology, and sample populations is striking. These repeated findings build generalizability for the notion that such experiences as multi-context stigmatization, disclosure issues, and various forms of isolation and negative emotion are aspects and consequences of HIV-related stigma in HIV-positive African American women and related populations (Davtyan et al., 2016; Fletcher et al., 2016). Although Jang and Bakken (2017) studied a more general sample of 292 urban PLWH using a quantitative survey, their results serve to strengthen the generalizability of these findings even further: the researchers, too, found that their participants experienced a perception of negative societal beliefs and a fear of disclosure.

Researchers of all related works cited in this section emphasized that stigma is especially felt by HIV-positive African American women or PLWH in the domain of medical care, a finding that is shocking given the specific expertise of medical professionals (Darlington &Hutson, 2016; Davtyan et al., 2016; Fletcher et al., 2016; Jang & Bakken, 2017). Although none of these researchers examined the specific impact of HIV-related stigma originating from medical professionals, this may be an area that is worth targeting in other studies and addressing at a societal level.

In addition to the negative consequences of HIV-related stigma in African American women uncovered by Fletcher et al. (2016) and Davtyan et al. (2016), graver negative consequences were observed by Rueda et al. (2016). In their literature review of

64 studies, the authors analyzed the association between HIV-related stigma and health among PLWH, finding that HIV-related stigma was significantly associated with serious mental, emotional, and physical consequences for PLWH. These consequences included the following: (a) higher rates of depression, (b) lower levels of social support, (c) lower adherence to antiretroviral medication, and (d) lower access to and usage of health and social services (Rueda et al., 2016).

In relation to studies in the present and previous section, several of the issues isolated by Rueda et al. (2016) seem to cooccur. For example, Burke-Miller et al. (2016) found that depression was related to non-adherence to treatment in low-income HIV-positive urban women. Furthermore, factors such as greater racial discrimination can coincide with an experience of greater HIV-related stigma in HIV-positive Black women (Logie et al., 2016), which can be associated with the further negative consequences observed by Rueda et al. (2016). Clearly, the findings of such a study as the one conducted by Rueda et al., in the context of the other works discussed in this literature review, area prime example of the ways in which the situation of HIV in African American women is highly complex and interwoven with a number of other co-occurring issues, including those of a socioeconomic and structural nature (Baird & Walters, 2017).

Role of Spirituality and the Black Church in HIV-Related Stigma

Given that the current study primarily focused on how spirituality and religiosity, as measured by church attendance and daily prayer, impact the lived experiences of Black women with HIV/AIDS, this section briefly considers what is known about this situation in the case of experiences of HIV-related stigma. Spirituality may positively mediate the

negative association between HIV stigma and psychological well-being in PLWH (Porter et al., 2017). African American churches as institutions, however, may actually contribute to HIV-related stigma in African Americans due to conservative religious views about HIV acquisition and sexual orientation, especially those held by pastors (Payne-Foster et al., 2018; Quinn et al., 2016).

Potential for Spirituality to Positively Mediate HIV-Related Stigma. Hutson et al. (2018) and Porter et al. (2017) focused their studies on the relationship between spirituality, HIV-related stigma, and well-being among PLWH. Hutson et al. (2018) examined spiritual well-being and stigma among 216 PLWH in the Appalachian South, speculating that this was an HIV-prevalent area in which HIV-related stigma was high due to religious conservatism, yet paradoxically spirituality itself might be an effective coping mechanism for PLWH. As could be expected, existential well-being was negatively correlated to HIV-related stigma in this population. Interestingly, for women in the sample, both stigma and religious well-being were higher, suggesting that these women may be more affected by stigma, perhaps due to greater fears about social deviance as well as cultural myths about HIV (Davtyan et al., 2016; Hutson et al., 2018).Additionally, women or HIV-positive women—at least in the sample—may tend to be more religious and/or derive greater benefits from religion (Hutson et al., 2018).

It is contradictory, however, that the women in this sample would report both high religious well-being and high stigma, suggesting that, despite the well-being they gained from religion compared to men, it may still not be enough to achieve the same lower stigma baseline the men possessed (Hutson et al., 2018). The authors, however,

concluded that their findings revealed the importance of differentiating between cultural religious practices and personal spiritual beliefs. As Porter et al. (2017) showed in the case of older PLWH, spirituality as opposed to organized religion may in fact be a direct predictor of higher well-being, unlike the findings of Hutson et al. (2018), in which such relationships remained unclear.

Prior to discussing the findings of Porter et al. (2017), who examined the impact of spiritual practices on HIV-related stigma in older PLWH, it is first necessary to discuss mixed findings regarding the actual extent of HIV-related stigma in older HIV-positive women (Cuca et al., 2017; Sangaramoorthy et al., 2017). Sangaramoorthy et al., in their study of 35 Black HIV-positive older women in Maryland, found that HIV stigma was still a critical issue for their participants. Cuca et al. (2017), however, in their more general study of 135 HIV-positive women in the Bay Area, noted that age made a significant difference in a woman's degree of perceived HIV-related stigma. Indeed, Cuca et al. found that older women reported significantly less HIV-related stigma than their younger counterparts, speculating that with age may come a lessened fear of social disapproval.

It may be the case that because Sangaramoorthy et al. (2017) did not include younger women in their sample, the distinction between degrees of HIV-related stigma in younger and older women was missed. Additionally, these mixed findings may be the result of limitations to generalizability; it may be the case that older HIV-positive Black women in Maryland experience greater stigma than women of other races or women living in the San Francisco Bay Area (Cuca et al., 2017; Porter et al., 2017). While it is

impossible to make a conclusion with existing evidence, it is important to consider the possibility that, at least in some cases, older HIV-positive women may experience lower stigma and that men may experience lower HIV-related stigma than women (Cuca et al., 2017; Hutson et al., 2018).

Porter et al. (2017) examined the association between HIV-related stigma, psychological well-being, and the mediating resources of spirituality and integrative health in PLWH aged 50 and older. In the context of the preceding discussion, it may be the case that these PLWH experienced less HIV-related stigma as a baseline than other demographic populations, such as younger women with HIV (Cuca et al., 2017). Using data from the Research on Older Adults with AIDS study, Porter et al. found that spirituality and complementary and integrative health approaches mediated the negative association between HIV stigma and psychological well-being in older PLWH. In a striking complement to this finding, Ironson et al. (2011) conducted a longitudinal study of 177 mid-stage HIV patients, discovering that overall positive spiritual coping—including spiritual practices—predicted greater survival over 17 years. Later sections will continue to return to the findings of Porter et al. (2017) and Ironson et al. (2011), as this literature review becomes increasingly focused on African American spirituality and religiosity and the potential benefits of these qualities to the well-being of Black PLWH, as well as the mixed health value of the Black Church.

The Black Church and HIV-Related Stigma. Payne-Foster et al. (2018) noted that, although the Black Church has a history of addressing community health concerns, providing much-needed resources and support, HIV-related stigma within the Church

may paradoxically aggravate some of the problems of HIV-positive or at-risk congregants. The authors aimed to test the efficacy of an HIV-stigma reduction intervention in 12 African American churches among 199 adults, including congregants and church leaders, who participated in the intervention. The fact that the intervention significantly reduced individual-level HIV-related stigma may reveal the extent to which congregants and leaders possessed HIV-related stigma to begin with; however, this may have also partly been the result of individuals attempting to illustrate a desirable outcome. Furthermore, the authors noted that individuals may not have accurately reported the extent of their preintervention HIV-related stigma beliefs due to social desirability bias (Payne-Foster et al., 2018). This discussion was merely the start of this literature review's increasing focus on the issues of negative religious attitudes towards homosexuality and HIV in the Black Church, which will continue in the next section on African American MSM (e.g., Quinn et al., 2016; Smallwood et al., 2016).

Sexual Orientation in African American Men

Although it may seem tangential to devote a major section of this literature review to African American MSM, given that the current study focused on HIV-positive African American women, the sexual risk-taking behaviors of African American MSM directly affect the women they or their male sexual partners may go on to have sex with (e.g., Geter et al., 2016). This section, building upon the previous section, first considers how Black MSM, especially in the South, experience HIV-related stigma and homosexuality-related discrimination, including how the latter can lead to IH that can culminate in high sexual risk-taking behavior (Geter et al., 2016). The second part of this section focuses

more specifically on the rootedness of IH in the antihomosexual attitudes that can prevail in African American churches, especially in the deep south (e.g., Quinn et al., 2016; Smallwood et al., 2016, 2017).

HIV-Related Stigma and Homosexuality-Related Discrimination Among Black MSM

Bogart et al. (2017) compellingly illustrated the intersectionality of discrimination that HIV-positive Black MSM experience. In their qualitative study of 27 HIV-positive Black MSM, the authors found that intersectional discrimination was the running theme of individual interviews. Participants reported experiencing ongoing discrimination across all of their identities. To confront this multifaceted discrimination, participants employed the following coping strategies: (a) reactive avoidance (using behaviors, cognitions, and emotions to escape discrimination); (b) proactive avoidance (avoiding certain situations); (c) external attribution for discrimination; and (d) social support-seeking (most often for racism).

Of all the coping strategies isolated by Bogart et al. (2017), the last is of the most interest to this discussion. Although it is possible that Black MSM could simply find more Black people with whom they could confide their racial struggle, HIV-positive Black MSM could also avoid social support regarding their other identities because of the comparative stigma and unacceptance of being HIV-positive and queer as opposed to Black (Bogart et al., 2017). Furthermore, as Calabrese et al. (2018) found, the intersectional discrimination Black MSM experience can be more than the sum of its parts; others may discriminate against Black MSM in group-specific ways, perhaps making their identity even more isolating.

Calabrese et al. (2018) examined the sexual stereotypes attributed to Black MSM compared to Black men and gay men by creating and distributing a survey to members of the general public. Although gay Black men shared certain stereotypes with gay and Black men in the eyes of the public, their group-specific stereotypes were negative and mostly STD-related, namely "down low," "diseased," "loud," and "dirty" (Calabrese et al., 2018). The term "down low" is an African American slang term that refers to the sexual identity of a Black man who is usually heterosexual but can engage in sex with men, sometimes without the knowledge of their female partner (Calabrese et al., 2018). These intersectional stereotypes in Black MSM, linked to HIV and sexual risk (Calabrese et al., 2018), could conceivably lead to greater stigma in this population.

Despite the potential for compounded intersectional experiences of stigma and discrimination in HIV-positive Black MSM, as revealed by Bogart et al. (2017) and Calabrese et al. (2018), Garett et al. (2016) revealed that levels of stigma may be lower than expected in some samples. Garett et al. examined levels of HIV/AIDS stigma in 112 primarily (88%) Black and Latino MSM social media users from Louisiana. The researchers found that, although low reported stigma scores were consistent with overall decreasing trends in HIV/AIDS stigma, the fact that such scores were reported in minority men was surprising. The findings of this mixed sample of primary Black and Latino MSM, especially those living in Louisiana, an urban hub where queerness and HIV may be more acceptable, cannot be entirely generalized to Black MSM in general and in the south or deep south in particular (Garett et al., 2016). In the case of a sample of young Black MSM in Mississippi, for example, it appeared that the disapproval of the

community was associated with far-reaching dangerous consequences in terms of HIV transmission risk (Geter et al., 2016).

Geter et al. (2016) powerfully illustrated the potential negative consequences of antihomosexual attitudes in the deep south for the population of African American MSM and, implicitly, African American women as well. In their qualitative study, the authors explored how cultural norms regarding antihomosexuality interfered with the safe sex practices and relationship norms of young Black MSM (aged 18-29) in Mississippi. Their sample of 54 Black MSM participated in nine focus groups. The major finding of this study was that closeted participants were more likely to engage in inconsistent condom use and intimate partner violence than participants who were "out" (Geter et al., 2016). Some of the sexual risk-taking behavior in closeted young Black MSM took the form of sexual intercourse with "Trade" partners as part of an anonymous network of casual sex partners. According to the authors, closeted young Black MSM appeared to internalize the antihomosexual attitudes of their communities, leading to self-hatred that culminated in risky sexual behavior and intimate partner violence. Of all the studies featured in this literature review, the authors of this study revealed the clearest link between antihomosexual attitudes and HIV prevalence in Black women, as some Black MSM in this chain of risk-taking sexual partners may have gone on to have sex with Black women (Geter et al., 2016). Although the authors did not directly explore the religious dimension of antihomosexual attitudes in the deep south, this is the focus of the next section (Geter et al., 2016; Quinn et al., 2016; Smallwood et al., 2016, 2017).

The Role of the Black Church and Spirituality in HIV Outcomes for Black MSM

The Black Church, while frequently characterized as the heart of the African American community (Stewart & Thompson, 2016), may be an indirect contributor to poor outcomes for Black MSM, especially in the South, due to antihomosexual religious norms (Quinn et al., 2016; Smallwood et al., 2016, 2017). Spirituality, however, may be associated with higher well-being in the same population (Smallwood et al., 2017). Smallwood et al. (2017) used data from the earlier Sexual Health in Faith Traditions (SHIFT) study to determine the relationship between the key constructs of spirituality, religiosity, and IH and condom use for anal intercourse in Black MSM in the Deep South.

The major findings of Smallwood et al. (2017), based on surveys of 348 Black MSM recruited from Black Gay Pride celebrations in the Deep South, were that (a) almost half of respondents used condoms during every anal intercourse, (b) higher religiosity was associated with higher IH and lower gay affirmation, and (c) higher spirituality was associated with higher gay affirmation. The authors concluded that their findings reaffirmed the notion that Black religious communities perpetuated homosexuality-related stigma. Their finding that spirituality had a positive impact on gay affirmation, whereas religiosity has a negative impact on the same attribute, however, exemplified an important distinction that is related to and consistent with other findings about the differential impact of spirituality and religiosity on Black MSM and HIV-positive men and women (Himelhoch & Njie-Carr, 2016; Porter et al., 2017; Runnels et al., 2018). Furthermore, because religiosity was associated with IH in this population of Black MSM in the deep south (Smallwood et al., 2017), and the findings of Geter et al.

(2016) suggested that there was a connection between IH, closeted status, and sexual risk-taking in a similar but much smaller sample, religiosity could potentially lead to greater sexual risk-taking (Geter et al., 2016; Smallwood et al., 2017).

Smallwood et al. (2016) further examined the dimensions of IH in African American MSM in the deep south. Once again using data from the SHIFT study, this time with a sample of 261 African American MSM in the deep south, the authors found that IH was a unique phenomenon in this population compared to predominantly White MSM. Indeed, it was necessary for the authors to separate IH into two separate yet related dimensions in these men: (a) personal (individual) homonegativity and (b) moral (social) homonegativity. Noting that African American religious communities had a notable collective orientation, and that antihomosexual attitudes were likely reinforced by churches, families, and communities, the authors concluded that African American MSM may face difficulties in separating their personal feelings about their sexuality from their sociocultural context. Therefore, something experienced as individual, similar to the self-hatred noted by Geter et al. (2016), is partly an internalized cultural attitude (Smallwood et al., 2016). According to the authors, two intertwined dimensions of personal and moral homonegativity form the dual-sided experience of IH in African American MSM in the deep south. These confused inner feelings may be exacerbated by the contradictory teachings of some Black pastors, who reinforce that the Church is a place of universal love and acceptance, making it appear to be a positive community for Black MSM while simultaneously upholding that homosexuality is a sin (Quinn et al., 2016).

Quinn et al. (2016) analyzed the homosexuality-related ideologies of Black pastors to reveal their generally contradictory nature. In a qualitative study of 21 pastors in six Black churches, the authors found that the split between theory (universal acceptance) and practice (homonegativity) was the striking theme of their interviews. Indeed, despite the prominence that Christianity held in the lives of some Black MSM (Smallwood et al., 2017), these Black pastors believed that homosexuality was a personal choice that was incompatible with Christianity (Quinn et al., 2016). This prevalent pastor ideology further supported the notion that IH, especially in very religious Black MSM, must be a complex and confusing inner experience (Geter et al., 2016; Quinn et al., 2016; Smallwood et al., 2016, 2017). Although the Black Church is becoming increasingly involved in HIV care interventions (e.g., Brand, 2019; Stewart et al., 2018), Quinn et al. (2016) noted that their findings revealed a compelling reason for the inherent complexity of implementing HIV prevention efforts in Black churches (Quinn et al., 2016).

Despite the inherent difficulty of implementing HIV prevention efforts in Black churches, especially for Black MSM, as captured by Quinn et al. (2016), Jeffries (2014) examined the ways in which Black churches and public health organizations may in fact form successful partnerships. Although the pastor ideologies identified by Quinn et al. were overwhelmingly negative towards homosexuality, Jeffries argued that certain Black churches have begun the process of reevaluating homophobia in a way that aligns with, rather than fights against, biblical scripture. Noting that homophobia is the lynchpin of HIV silence within the Black Church, which is normally eager to address public health concerns in Black congregants, Jeffries suggested that an effective HIV prevention

strategy could begin with framing scripture in a way that supports prevention. Rather than maintaining the pastoral cognitive dissonance discovered by Quinn et al., Jeffries believed that pastors and churches could focus on biblical passages that espouse health, compassion, justice, and the support of marginalized groups, rather than antihomosexuality. Furthermore, Jeffries suggested that public health organizations focus on partnering with churches that already implement this more socially liberal approach towards their queer congregants. Thus, Jeffries complicated the findings of Quinn et al., revealing that not all pastors and churches hold a purely negative view towards homosexuality; however, it is important to note that neither of these studies focused on the south or deep south in particular, where homonegative attitudes may be particularly culturally entrenched (Geter et al., 2016; Smallwood et al., 2016, 2017).

Emotional and Psychological Consequences of Discrimination for Black MSM

Certain researchers in this literature review already identified the potential internal repercussions of homonegativity in Black MSM, such as low gay affirmation (Smallwood et al., 2017) and IH (Smallwood et al., 2016) that may lead to self-hatred and sexual risk-taking (Geter et al., 2016). Boone et al. (2016) further explored the associations between psychological distress, HIV status, and sexual identity among 228 young Black MSM. Tellingly, Boone et al. did indeed find that internalized homophobia was significantly related to psychological distress, but only for homosexual and not bisexual Black men. Furthermore, HIV-related stigma was related to psychological distress for HIV-positive but not HIV-negative Black MSM. In regard to their first finding, Boone et al. suggested that bisexuality may allow young Black men to appear

more “normal” by concealing their same-sex sexual behavior while making their heterosexual activity more public. Homosexual Black men, by contrast, may find it more difficult to appear acceptable to their communities and experience psychological distress as a result (Boone et al., 2016).

McQueen and Barnes (2017) analyzed another repercussion of discrimination in Black MSM, namely changes in social support. Using a single 90-minute focus group of eight Black MSM in a metropolitan city in Tennessee for their data, the authors found that two major themes emerged regarding social support: (a) the importance of traditional and non-traditional social support and (b) the call for greater community support of Black MSM. Due to the lack of parental acceptance that participants often reported, many of them noted the importance of “alternative” gay families in their lives, comprised of queer members of the community playing a familial (father/son) and occasionally, but not necessarily, sexual role in each other’s lives. Despite experiencing valuable alternative and traditional social support, however, the overwhelming message of the focus group was that they lacked their community’s support. This lack was not merely social, but also resource-related, as such resources as job support and housing assistance were lacking, which their multiple identity marginalization rendered paramount (McQueen & Barnes, 2017). As will be discussed in the next section, low social support, like IH, is associated with more episodes of condomless sex with all partners, this time in the case of primarily bisexual Black urban men (Geter et al., 2016; Joseph et al., 2018).

Sexual Risk-Taking Among Black MSM and Implications for HIV Transmission

As was the case with other researchers (i.e., Geter et al., 2016), Joseph et al. (2018) found that sexual risk-taking among Black MSM was associated with other factors, in this case network size, education, income, sexual orientation, exchange status, and social support. What was notable about their sample was that it was primarily (75%) bisexual, comprised of 584 Black men from Louisiana, Philadelphia, and Chicago (Joseph et al., 2018). In other words, this study had even more bearing on the current study, as its findings regarding sexual risk-taking in Black bisexual men had more direct implications for HIV transmission risk to Black women. Despite the large sample size of 584, the authors conducted an individual interview with each participant.

Joseph et al. (2018) noted the following major findings: (a) both sexual risk behaviors and environmental factors contribute to increased HIV risk; (b) sexual identification as bisexual was associated with more risk-taking among male partners and less among female partners; and (c) low social support was associated with more condomless sex with all partners, but especially male partners (Joseph et al., 2018). Because low social support may be associated with family or community disapproval (McQueen & Barnes, 2017), which is a contributor to IH (Smallwood et al., 2017), this finding is related to the findings of Geter et al. (2016) and Boone et al. (2016) that internalized homonegativity can lead to psychological distress or self-hatred, which may result in sexual risk-taking.

Maksut et al. (2016), like Joseph et al. (2018), examined the factors associated with sexual risk-taking among Black urban MSM. Maksut et al., however, focused on the

differences between older and younger Black MSM in the Atlanta metropolitan area. Their sample of 450 Black MSM answered a quantitative survey. The authors found that the younger and older population significantly differed with respect to the factors associated with condomless anal intercourse (CAI). For younger Black MSM, CAI was positively associated with alcohol use, lower education, and a bisexual sexual identity. For older Black MSM, CAI was negatively associated with HIV risk perceptions and internalized homophobia; in other words, these factors led to less CAI (Maksut et al., 2016).

The findings of Maksut et al. (2016) complicated the findings of, for example, Geter et al. (2016), which were that young Black MSM (aged 18-29) engaged in sexual risk-taking behavior due to IH. Not only did Maksut et al. find that CAI was associated with completely different factors in young Black MSM, but also that internalized homophobia was actually found to have the opposite effect in older Black MSM. Overall, the findings of Maksut et al. illustrated that there may be factors other than IH (Geter et al., 2016) and low social support (Joseph et al., 2018) at play when younger Black MSM engage in condomless sex (Maksut et al., 2016). The findings of Maksut et al., however, also confirmed that of Joseph et al. (2018) regarding bisexuality as a risk factor for greater sexual risk-taking, at least in younger Black MSM, which has implications for the risk of HIV transmission to Black women (Joseph et al., 2018; Maksut et al., 2016).

African American Sexual Gender Roles and HIV Transmission to Women

Despite the high aforementioned risk of HIV acquisition for African Americans (Breskin et al., 2017; Wiewel et al., 2016), African American women and young adults

do not always perceive their HIV risk as high, placing them at an even greater risk of infection (Edwards et al., 2017; Heath, 2016; Newsome et al., 2017). Even in the case of middle-class and college-educated Black women whose sense of risk may be especially low, an HIV risk disparity still exists when they are compared to women of the same class but different race (Heath, 2016; Newsome et al., 2017). Overall, it may be the case that, for African Americans most at risk, everyday issues associated with being Black, such as police violence and socioeconomic disparity, overshadow the perceived urgency of HIV risk (Edwards et al., 2017).

In their study of African American emerging adults, Edwards et al. (2017) revealed a dismal picture regarding HIV risk perceptions and future expectations for this population. Using a sample of 365 emerging adults aged 18-25 (95% African American), the authors conducted a mixed method study based on quantitative surveys and group interviews. This population viewed their risk of HIV acquisition and transmission as low-to-none, when it was in fact high (Edwards et al., 2017). Furthermore, despite participants' overwhelming attitude of invincibility, many participants also expressed fatalism about their future life expectancies. Both attitudes contributed to a present-focused attitude that was accompanied by high risk-taking, including condomless sex (Edwards et al., 2017). Such a risk-taking cycle explains why even Black women of a higher SES are still at risk for HIV infection due to problems within the broader racial community; indeed, college-educated Black women report a shortage of suitable and available male partners, which can result in sexual contact with HIV-infected men (Edwards et al., 2017; Newsome et al., 2017).

Newsome et al. (2017) conducted a qualitative study of 10 African American college-educated women aged 25-34 living in Chicago. In their focus groups, Newsome et al. discovered how the large imbalance between education and SES in Black men and women impacted the participants. Their major findings were as follows: (a) a limited pool of available male partners, (b) pressure to get married, (c) feelings of competition among women for male partners, and (d) men's negotiating power in relationships. Due to participants' general desire to find a suitable long-term Black male partner of similar or greater SES, participants reported that competition for the men they desired led to feelings of female dispensability and interchangeability that hindered the growth of their relationships. Furthermore, according to participants, the desirability of certain partners led to men's negotiating power when it came to condom use, at least in the case of other female partners of lower SES, which directly placed the participants at risk for HIV infection (Newsome et al., 2017). The authors' findings may help explain that of Heath (2016), which were that two-thirds of middle-class urban Black women in their sample contracted HIV while in a monogamous relationship.

Black Masculinity and Black Women

According to Black women, Black manhood is characterized by both positive and negative attributes (Abrams et al., 2018). In their qualitative study of 44 Black women (aged 18-91) from the mid-Atlantic region, Abrams et al. (2018) found that Black women identified three major themes of Black manhood: (a) physical and mental strength, (b) challenges with familial and personal connections, and (c) circumstances beyond their control. Although participants admired the strength of traditional Black masculinity,

characterizing Black men as “strong armed and strong minded,” they also reported more negative interpersonal issues with Black men rooted in social disparity (Abrams et al., 2018).

Participants of this study noted that, although they perceived Black men as sometimes interpersonally and romantically unstable, this was an issue that traced back in history as far as American slavery, when Black men could not afford to become too attached to their families (Abrams et al., 2018). Participants also stressed that certain issues with Black men were rooted in the Black experience of social disadvantage, including socioeconomic disparity (Abrams et al., 2018). This relates to the explanation brought forth by Breskin et al. (2017) that many of the problems African Americans face today relate to wide social and economic disparities formed in the 19th century. Although Black women of various ages have reported compelling historical reasons for issues within their relationships with Black men, it is clear that aspects of Black manhood, as perceived by Black women, may interfere with their own present-day positive outcomes in the sphere of sex and relationships, especially regarding their ability to find stable, monogamous partners with low HIV risk (Abrams et al., 2018; Newsome et al., 2017).

Vincent et al. (2016) examined more specifically how adherence to traditionally masculine norms affected couples’ condom-related beliefs in the case of young pregnant African American and Hispanic couples. Their sample included 296 couples in Connecticut with the female partner aged 14-21. Although Vincent et al. (2016) noted that many would assume masculine norms negatively affect condom use, this was shown to not always be the case. Indeed, adherence to what they termed the Status norm—a

sense of traditional masculine self-reliance—was related to a sense of responsibility for oneself and one's partner that predicted men's positive condom-related beliefs (Vincent et al., 2016).

Vincent et al. (2016) did, however, find that adherence to antifemininity and Toughness masculinity norms did predict men's negative condom-related beliefs. Moreover, men's masculinity beliefs were shown to affect the condom-related beliefs of both partners in the dyad. Although the sample did include Hispanic couples, these findings still hold weight for the present discussion (Vincent et al., 2016). If the masculinity beliefs of the male of a Black couple was shown to predict condom-related beliefs that lead to condom usage behaviors, the sexual health outcomes of Black women may be partly in the hands of Black men's views, justifying why some scholars stress the importance of sexual self-efficacy in young Black women (Collins et al., 2017).

Sexual Risk and Self-Efficacy in Black Women

Newsome and Airhihenbuwa (2013) noted that the problem of high HIV prevalence in African American women compared to women of other races hinged not necessarily on greater sexual risk-taking, but rather exposure to higher-risk partners. The qualitative findings of Newsome et al. (2017), although they emerged from a relatively small pool of college-educated Black women, constituted a salient subjective explanation of why even educated Black women were exposed to such partners. A shortage of suitable and available male partners led men to have more sexual partners and greater leverage to negotiate condom use, according to this sample of Black women (Newsome et al., 2017). Furthermore, because Vincent et al. (2016) found that the male partner's

masculinity beliefs affected the condom-related beliefs of both partners in minority couples, and because primarily Black college women believed that condoms were a male responsibility (McLaurin-Jones et al., 2016), it is understandable that sexual self-efficacy in African American women may be an area for intervention for some researchers (Collins et al., 2017). In other words, if Black women took control of condom negotiation with full awareness of their HIV risk, they could potentially lower it, which is a phenomenon that would require sexual self-efficacy, or a steady belief in one's ability to exert control over one's safe-sex behavior and motivation in the context of one's given environment (Bandura, 1986; Collins et al., 2017; McLaurin Jones et al., 2016).

McLaurin-Jones et al. (2016) further illustrated what young, primarily (74%) Black women may perceive as barriers to their control over condom negotiation with male partners. Their sample included 100 sexually active college women at a Historically Black College or University (HBCU) who participated in a mixed method study, both answering questionnaires and participating in focus groups. The primary questionnaire finding was that women who were consistent condom users were also more likely to withhold sex and directly request a condom; in other words, these women appeared to exhibit greater sexual assertiveness and self-efficacy, determining their own sexual health outcomes through their behavior (Addoh et al., 2017; Bandura, 1986; McLaurin-Jones et al., 2016). Fewer than one-third of women, however, reported consistent condom use (McLaurin-Jones et al., 2016). In the focus groups, the women reported the following threats to the occurrence of a condom negotiation: (a) issues of timing for a discussion and (b) having a previous history of condomless sex with their partner. Despite the fact

that most women reported the importance of a condom discussion, the findings of McLaurin-Jones et al. (2016) suggested that primarily Black college women sometimes faced difficulties in putting their beliefs into practice during the critical moment.

Addoh et al. (2017) reported a significant link between self-efficacy for partner disapproval (ability to use a condom despite partner disapproval) and safe-sex practice, yet male beliefs in minority couples tend to influence the condom-related beliefs of female partners (Vincent et al., 2016), and Black women may engage in condomless sex due to the beliefs of their male partner. Although Joseph et al. (2018) reported that Black male bisexuals were more likely to engage in riskier condomless sex with men than women, an apparent tendency for some Black male bisexuals to hide their same-sex behavior (Boone et al., 2016) puts women at a higher-than-expected risk for HIV if they do engage in condomless sex. Given the high risk for African American women, especially of low SES in the Deep South, to acquire HIV (Breskin et al., 2017), this section's findings are both illuminating and distressing. African American women may not always engage in sex with a condom, perhaps due to the beliefs of their male partner or issues with sexual self-efficacy (McLaurin-Jones et al., 2016; Vincent et al., 2016), putting them at a high risk of HIV due to potential exposure to high-risk partners (Newsome &Airhihenbuwa, 2013; Newsome et al., 2017).

Despite the apparent need for interventions that teach sexual self-efficacy to African American women, such an intervention may not be as effective as hoped (Collins et al., 2017). Collins et al. tested the efficacy of an evidence-based intervention, Creating Lasting Family Connections (CLFC), designed to prevent substance abuse, strengthen

relationship skills such as sexual self-efficacy, and reduce risk for HIV/AIDS in African American women. Researchers tested the intervention on an experimental group of 175 African American women and also recruited a control group of 44 African American women of similar backgrounds. The program led to greater numbers of women testing for HIV and obtaining their results, as well as a sustained decrease in intimate partner abuse and increased general relationship skills, which implicitly held promise for long-term safer sex and relationships in this sample. It is notable, however, that the program only marginally increased the specific skill of sexual self-efficacy over time, suggesting both the challenge of teaching this skill and the program (Collins et al., 2017). It may be the case that the program was not primarily focused on sexual self-efficacy, which meant that these skills were not sufficiently reinforced, or researchers must further consider what African American women need to further develop this skill (Collins et al., 2017).

Although no recent studies specifically considered the sexual self-efficacy needs of Black women, especially young or college-aged Black women, several studies reported their general unaddressed HIV prevention intervention needs (Chandler, 2016; Lindong et al., 2017). In their qualitative study, Chandler interviewed 32 Black women at an HBCU in four focus groups to understand their HIV prevention needs. These women reported that they wanted clear information about STDs and access to contraception (Chandler, 2016). Furthermore, these women reported their fears of appearing promiscuous when seeking health services related to HIV that were related to general HIV-related stigma. These findings aligned with that of Lindong et al. (2017), who also studied Black women (and men) at an HBCU, to understand their differing HIV

prevention needs. Compared to Black men, Black women in this sample of 365 students were found to be less likely to get tested for HIV as reported in a quantitative survey (Lindong et al., 2017). The researchers reported the importance of discretion for the Black college female population, for whom they suggested extremely private and even unconventional testing sites such as churches and libraries (Lindong et al., 2017).

Although the programming changes suggested by Chandler (2016) and Lindong et al. (2017)—including information, contraception, and discrete HIV testing sites—would not directly increase sexual self-efficacy skills, they would perhaps alter the environment in such a way that would make the practice of sexual-self efficacy at HBCUs and other settings easier for Black women (Bandura, 1986; Chandler, 2016; Lindong et al., 2017). Still, it is clear that this literature review has come to an important impasse: sexual self-efficacy in Black women appears to be little-understood and addressed by either recent researchers or public health advocates. This further justifies the importance of considering self-efficacy as a variable in this study.

HIV-Related Resources and Support in the Black Church and Beyond

In this section, I consider the role that the Black Church, personal spirituality, and alternative worldviews may play in HIV care across the spectrum from prevention to postdiagnosis support, with a focus on African American women in the south. Given that the Black Church is often regarded as the heart of many African American communities (Stewart & Thompson, 2016), and has been an arena for addressing community, including health, concerns (Payne-Foster et al., 2018), it is only natural that public health advocates have attempted to understand and develop the potential of HIV care

programming in Black churches (e.g., Brand, 2019; Stewart & Thompson, 2016). In this research, the recent work of public health scholar Jennifer Stewart and colleagues was particularly noteworthy and extensive (Stewart et al., 2016b; Stewart et al., 2017; Stewart & Thompson, 2016; Stewart, Rogers, Bellinger, & Thompson, 2016; Stewart, Thompson, & Rogers, 2016).

This section also includes ways in which HIV-positive and at-risk Black women's church attendance or personal spiritual beliefs and practices affected their HIV outcomes (e.g., Himelhoch & Njie-Carr, 2016; Williams et al., 2016). Finally, in this section, I discuss the use of alternative spiritual female coping methods to find individual solace in an HIV diagnosis or (e.g., Himelhoch & Njie-Carr, 2016).

Church-Based HIV Interventions in Black Communities

Reported levels of HIV-associated stress and anxiety in congregants were lower in Black churches in Philadelphia that offered HIV testing (Stewart et al., 2017), and church-based HIV testing was shown to offer testing to significant numbers of minority Americans who would otherwise not have access to it (Williams et al., 2016; Wingood et al., 2019). In one sample, Black community members reported feeling more comfortable receiving HIV testing in a church than a clinical setting (Stewart & Thompson, 2016). Despite these promising findings, however, significant barriers exist in the implementation of not only church-based HIV testing, but also the further HIV care and support that some public health scholars have pushed for in Black churches (Brand, 2019; Stewart et al., 2018; Stewart et al., 2016; Stewart & Thompson, 2016). As previously discussed, Black churches, and more specifically Black pastors, tended to endorse

conservative religious views that fostered homonegativity, antihomosexuality, and HIV-related stigma in the Black Church, especially in the South (Quinn et al., 2016; Smallwood et al., 2016).

Numerous scholars have further illustrated the various barriers and obstacles, ideological and otherwise, to successfully implementing church-based HIV care for African Americans (Brand, 2019; Stewart et al., 2016a; Stewart et al., 2016b; Stewart et al., 2018; Stewart & Thompson, 2016). In relation to the previously noted ideological issue, Black pastors or other church leaders were uncomfortable with the religious implications of addressing HIV, as discovered in the work of Stewart and colleagues, which consisted primarily of mixed method studies of Black churches, pastors, and congregants in Philadelphia (Brand, 2019; Stewart et al., 2016a; Stewart et al., 2016b; Stewart & Thompson, 2016).

In one study of four Black churches in Philadelphia, churches progressed through levels of readiness to address HIV, from full refusal to integration, where ideological religious concerns were paramount to unreadiness (Stewart & Thompson, 2016). In a related study, challenges included the difficulty of openly discussing the relationship between sexuality and HIV in a religious setting and securing the support of church leaders (Stewart et al., 2016b). Similarly, Brand (2019), in the case of 108 Black churches in North Carolina and Illinois, found that lack of interest from pastors was a major obstacle to implementing faith-based health programming in general. Despite the reluctance of church leaders to implement HIV interventions in some cases, however, Black women appeared to want it (Stewart et al., 2016a). Stewart et al. (2016a) found that

the majority of young Black church-going women in their sample (n=71) wanted churches to openly discuss HIV and sexuality, but the sample's church leaders were uncomfortable doing so, preferring to preach abstinence instead (Stewart et al., 2016a).

Black churches also reported economic and infrastructural barriers to implementing HIV interventions, such as limited space, facilities, personnel, and funding (Brand, 2019; Stewart et al., 2016b; Stewart et al., 2018). Overall, Black church leaders and pastors found some aspects of HIV care to be more feasible, such as support groups for the HIV-positive, and others less feasible, such as providing linkage to HIV care in the community (Stewart et al., 2018). The findings of this section illustrated that, although Black churches constitute a key potential site for HIV interventions (Williams et al., 2016; Wingood et al., 2019), ideological and other issues (Brand, 2019; Stewart et al., 2016a; Stewart et al., 2016b; Stewart & Thompson, 2016) have prevented Black female congregants in particular from receiving the church-based HIV and sexuality discussion they desire (Stewart et al., 2016a). Thus, although the Black Church represents an ideal community-based site for HIV intervention for Black women, prevailing discrepancies between church ideology and the realities of HIV acquisition seem to limit the potential of the Church to directly address HIV (Brand, 2019; Quinn et al., 2016; Smallwood et al, 2016; Stewart et al., 2016a; Stewart et al., 2016b; Stewart & Thompson, 2016). Progressive Black churches, however, which reappraised the HIV and sexuality situation through scripture espousing health and compassion, offer particular hope for the future of Black church-based HIV interventions (Jeffries, 2014).

Church, Spirituality, and Alternative Black Female Coping and Outreach Resources Along the HIV Spectrum

Given the significant barriers to HIV discussion and programming in Black churches, it is not surprising that some Black women found greater postdiagnosis solace in personal spiritual beliefs or family support than church attendance (Himelhoch & Njie-Carr, 2016; Runnels et al., 2018). Furthermore, some public health leaders and Black feminist activists have focused their efforts on secular community outreach rather than church outreach when addressing the problem of HIV prevalence in African American women (Amutah-Onukagha et al., 2018; McLane-Davison, 2016). At the same time, however, traditional church attendance was found to improve HIV outcomes, as measured by viral load suppression in a sample of 382 majority African American MSM (Wagoner et al., 2016). As this discussion continues, and increasing distinctions are found between the value of spirituality and religiosity for HIV-positive African Americans—especially women—, it is necessary to return to the suggestion of Hutson et al. (2018) to differentiate between cultural religious practices and personal spiritual beliefs in this population.

Effects of Traditional Church Attendance on the HIV Outcomes of African Americans. In the past several years, no researcher appears to have directly studied the relationship between church attendance and HIV experiences and outcomes in HIV-positive African American women in any region. This alone is a compelling reason for the current study to address the variable of church attendance in a sample of HIV-positive African American women. In the case of a sample of primarily African American men,

however, Wagoner et al. (2016), in a quantitative study with a medical orientation, evaluated the relationship between church attendance and HIV viremia. Viremia is a turning point of substantial HIV virus development. In a sample of 382 primarily African American MSM in the South, the authors found that those who reported church attendance at the time of initial entrance into HIV care were also less likely to report HIV viremia 12 months later (Wagoner et al., 2016). This is interesting, given the HIV-related stigma and homonegativity many Black churches seemed to promote; however, the authors believed that, although the Black church attendance may initially be disadvantageous to congregants at-risk, it later may become a place of support that promotes HIV health.

Wagoner et al. (2016) thus concluded that church attendance was a protective factor against HIV viremia, suggesting that it may provide vital support for new HIV care patients. The clear focus of Wagoner et al. (2016), which led to an illuminating insight regarding the potential health benefits of church attendance, still seemed to fall short of the full meaning of the researchers' stated goal. Although the authors aimed to understand the influence of religion on the HIV experience of people living in the south, their narrow focus on the presence of a single medical outcome meant that they did not capture lived HIV experiences including attitudes, beliefs, and self-perceptions of participants. Furthermore, the majority of their sample was African American males, and the researchers did not differentiate between the genders in their recruitment or analysis. Thus, although the authors began a thread of research, their study left many unknowns

regarding the influence of church attendance on other HIV-positive African American participants, including women, as well as non-medical aspects of HIV experience.

The other study in this literature review, which featured the variable of church attendance, was a qualitative study conducted by Williams et al. (2016). The authors examined the relationship between church attendance and sexual health topics discussed among urban Black women. This sample of 434 HIV-negative Black women from Baltimore were at high demographic risk for contracting HIV from heterosexual sex, and 54% of the participants were regular church-goers, attending at least once a month. The women participated in individual computer-based interviews, and the data led to an important insight regarding the potential relationship between church attendance and HIV outcomes. Regular church attendance was found to be a significant predictor of the number of sexual health topics discussed with both friends and partners (Williams et al., 2016). The researchers concluded that the social networks formed in church led to trusting relationships that fostered HIV risk reduction. The researchers noted, like Wagoner et al. (2016), that their results were contrary to popular belief, which is that the Black Church worsens rather than alleviates the problem of HIV prevalence in African Americans.

Similar to the study conducted by Wagoner et al. (2016), the present study led to an important insight regarding the possible relationship between church attendance and HIV outcomes (Williams et al., 2016). Moreover, Williams et al. focused on African American women specifically, leading to an important and gender-specific insight that may or may not be applicable to African American men. Unlike the current study,

however, this study featured a sample of HIV-negative at-risk women, not HIV-positive women. Although it could be the case that Black church social networks formed by regular church attenders also provided much-needed sexual health intimacy to HIV-positive Black women, this remains unknown for the time being (Williams et al., 2016). Furthermore, the present study focused on a single, narrow aspect of experience—sexual health topics discussed—rather than focusing more broadly on the lived experiences of Black women. Although Wagoner et al. and Williams et al. presented invaluable starting insights for the current study, their lack of focus on either HIV-positive Black women, or broader aspects of lived HIV experience, left a large gap for the current study to fill.

Alternative Spiritual Coping Resources and Solutions. Runnels et al. (2018) and Himelhoch and Njie-Carr (2016) both discovered not only the value of personal spirituality in HIV-positive African American, but also their explicit valuing of personal spirituality over church attendance. Runnels et al. examined previously collected interview data of HIV-positive African American women to examine their spiritual markers. The researchers isolated the following relevant themes in these interviews: (a) God was an attachment figure, (b) faith in God was a coping resource, and (c) family as a support network was more important than church attendance (Runnels et al., 2018). These findings clearly illustrated that personal beliefs about God were paramount to these HIV-positive women, as opposed to the explicit services and teachings of their local church. Furthermore, their social reliance on family as opposed to church networks either suggested that the HIV-related stigma of the church was too great or that family support was simply a more helpful resource for the HIV-positive, or both (Runnels et al., 2018).

The more extensive findings of Himelhoch and Njie-Carr (2016) supported that of Runnels et al. (2018), further suggesting that personal spirituality played a larger role than church attendance for the lived experience of HIV-positive Black women.

Himelhoch and Njie-Carr (2016) conducted a qualitative phenomenological study of four HIV-positive African American women to explore the relationship between their religious practices, spiritual beliefs, and experiences. Participants engaged in in-depth individual interviews. Himelhoch and Njie-Carr (2016) isolated the following four major themes in the interviews: (a) Religious Conflict and Return to Religious Practices, (b) Religious Fortitude Broken and Feeling Judged, (c) Spiritual Connection is More Powerful than Attending Church, and (d) Spiritual Healing and Re-Connecting with Spirituality. These findings suggested that these HIV-positive Black women, although deeply religious, found it extremely difficult to feel accepted by their church postdiagnosis, as exemplified by "religious conflict" and "feeling judged." Although some women experienced a "return to religious practices," the overwhelming theme of these interviews was that religiosity was, in a sense, replaced by personal spirituality. These women noted that church attendance in particular was not the most important part of their spiritual life. Despite the fact that all these women were deeply religious, Himelhoch and Njie-Carr (2016) found that some chose to avoid church to evade stigmatization, instead shifting to an inner spiritual life.

The findings of Himelhoch and Njie-Carr (2016), who conducted the study that was most closely related to the current study, predicted certain themes that the current study may uncover. The authors chose a phenomenological methodology, which allowed

them to define the lived experiences of their participants in great qualitative detail. Despite the rich findings of their study, however, Himelhoch and Njie-Carr (2016) did not choose a methodology that would lead to high generalizability, using a small sample of four women. Given that so little is known about the relationship between church attendance, personal spiritual beliefs, and HIV experience in HIV-positive Black women, a quantitative survey-based study may generate more generalizable findings that will contribute to a deeper understanding of the experiences and needs of African American women, who face alarming rates of HIV prevalence (Breskin et al., 2017).

Conclusion

This literature review illustrated the issues in HIV research that relate, directly or indirectly, to the HIV experiences of HIV-positive African American women, especially in the south, with an emphasis on HIV-related stigma, religiosity, and spirituality. A significant, alarming rate of HIV prevalence in African American women was found to be demographically imbalanced by both race and gender (Breskin et al., 2017). Moreover, this disparity in HIV diagnosis, at least from a racial perspective, was firmly rooted in historically entrenched socioeconomic disparity in African Americans (Baird & Walters, 2017; Breskin et al., 2017; Wiewel et al., 2016). Moreover, a diagnosis of HIV was generally accompanied by significant HIV-related stigma, which affected African American women in many aspects of life and was associated with serious mental and physical health consequences, including depression and treatment nonadherence (Cuca et al., 2017; Davtyan et al., 2016; Fletcher et al., 2016; Rueda et al., 2016).

The role of the Black Church in HIV outcomes was a major theme of this literature review. Because Black churches and pastors, especially in the South, tended to promote HIV-related stigma, homonegativity, and antihomosexuality, Black churches appeared to support negative outcomes for queer congregants including IH that was associated with greater sexual risk-taking in Black MSM (Geter et al., 2016; Quinn et al., 2016; Smallwood et al., 2016, 2017). This led to further risk for the target population of African American women, who sometimes appeared to struggle with condom negotiation and sexual self-efficacy, perhaps especially at younger ages (McLaurin-Jones et al., 2016; Vincent et al., 2016). Black churches, although in some ways constituting the ideal HIV intervention site for this population, do not always appear to be ideologically suited to the task of handling the problem of HIV and HIV-positive congregants (e.g., Himelhoch & Njie-Carr, 2016; Stewart & Thompson, 2016; Stewart et al., 2016b). Although in some studies church attendance was found to reduce negative HIV-related viral health outcomes (Wagoner et al., 2016) or increase the number of sexual health topic African American women discussed (Williams et al., 2016), HIV-positive Black women, on the whole, tended to value their personal spiritual beliefs over church attendance (Himelhoch & Njie-Carr, 2016; Runnels et al., 2018).

The current study addressed the research gap by building knowledge about the impact of religiosity and spirituality, measured by church attendance and daily prayer, on the experience of HIV-positive African American women in the south. Although some quantitative studies have focused on the impact of religiosity and spirituality on certain HIV outcomes—such as medical outcomes, or number of sexual health topics

discussed—, no recent quantitative study has focused on the broader experience of HIV-positive Black women (Wagoner et al., 2016; Williams et al., 2016). Further research is necessary regarding the wider ramifications of certain findings regarding the greater importance of spirituality as opposed to religiosity in HIV-positive Black women (Himelhoch & Njie-Carr, 2016; Runnels et al., 2018). In Chapter 3, I provide a detailed description of the methods that were used to address the purpose of the current study, which arose from the literature review.

Chapter 3: Research Method

Introduction

The purpose of this quantitative cross-sectional study was to determine if religion/spirituality affects the attitudes, beliefs, and self-perceptions of how HIV/AIDS is acquired among Black/African American women living in a southern city. Studies in the literature reviewed identified factors that predispose Black/African American women's risk of being infected with HIV (U.S. Department of Health and Human Services, 2019; Ludema et al., 2015). In addition, in this study, I sought to examine whether self-efficacy mediated the relationship between church attendance and daily prayer, as well as attitudes, beliefs, and risk perception about how HIV/AIDS is acquired. There is limited literature available on how Black/African American women use their personal religion/spirituality practices to influence their attitudes, beliefs, and self-perceptions of how HIV is acquired, and the role self-efficacy has on those behaviors (Krishnaratne et al., 2016; Ludema et al., 2015; Nunn et al., 2012; Roman Isler et al., 2014; Runnels et al., 2018). Furthermore, for many years, researchers have studied the role of the Black church in health promotion awareness and disease prevention among the Black community. Black churches in some areas may have a better understanding of the religion/spirituality practices of Black/African women, which may lead to a better understanding of their HIV risk factors. The results from this study could be significant to the field of public health as culturally appropriate HIV prevention measures are developed for Black/African American women.

In this chapter, I present an outline of the research design used for this study and the rationale for its selection and an explanation of the dependent and independent variables. Further, I describe the sampling procedures, how the sample was calculated, how they were recruited, and the potential threats to validity. The reliability of the measurement instrument will be provided as well as the procedures that were used to collect the data. Finally, ethical considerations are also addressed.

Research Design and Rationale

A quantitative, cross-sectional primary data analysis was used in the current study to assess how religion/spirituality practices affect the attitudes, beliefs, and self-perceptions of how HIV/AIDS is acquired among Black/African American women living in a southern city. I also sought to determine whether self-efficacy would mediate the relationship between church attendance and daily prayer, as well as attitudes, beliefs, and risk perceptions about how HIV/AIDS is acquired. A quantitative, cross-sectional design was selected because it allowed for a snapshot of the attitudes, beliefs, and perceptions of HIV/AIDS among Black/African American women, ages 25–44, living in a southern city. Although causality cannot be inferred, the results from this cross-sectional study might inform public health on information that can be collected for future studies as well as public health planning (Lee, 1994). I selected this research design because it is inexpensive and less time consuming and much less unwieldy compared to other research methods (Creswell, 2009).

The case control study design was not selected for this study because the objective was to determine the relationship between an independent and dependent

variable while a case control study focuses on the prevalence of exposure to the potential risk factors between a group with the disease and the group without the disease (case and control). Furthermore, case control study data on potential risk factors is collected retrospectively (Creswell, 2013). A cohort study design, like the case control study design, was not selected because it also compares the exposed and unexposed to the risk factor and then follows the study participants for years to determine the incidence (exposure to outcome) of the disease (Creswell, 2013).

The results from this cross-sectional study may help provide policymakers, public health officials, and community partners insights into planning effective HIV prevention programs for Black/African American women. In addition, the conclusions from this study may support the need for more studies like this to be conducted to advance and update the current knowledge surrounding HIV prevention among Black/African American women.

Methodology

RQ1: To what extent do religious/spiritual activities, defined as regular church attendance and daily prayers, have an impact on the attitude and beliefs of how HIV/AIDS acquired, as measured by the TCU HIV/AIDS Risk Assessment scale, among Black/African American women between the ages of 25 and 44 living in a southern city?

Ho1: Religious/spiritual activities, defined as regular church attendance and daily prayers, will not have an impact the attitude and beliefs of how HIV/ AIDS is acquired measured by the TCU HIV/AIDS Risk Assessment scale among

Black/African American women between the ages of 25 and 44 living in a southern city.

Ha1: Religious/spiritual activities, defined as regular church attendance and daily prayers, will have an impact on the attitude and beliefs of how HIV/AIDS is acquired, as measured by the TCU HIV/AIDS Risk Assessment scale, among Black/African American women between the ages of 25 and 44 living in a southern city.

The dependent variable is research participants' attitudes and beliefs of how HIV/AIDS is acquired. The independent variable is religious/spiritual activities, defined as regular church attendance and daily prayers.

RQ2: To what extent do religious/spiritual activities, defined as regular church attendance and daily prayers, have an impact on the perception of HIV/AIDS acquisition, as measured by the Perceived Risk of HIV scale, among Black/African American women between the ages of 25 and 44 living in a southern city?

Ho2: Religious/spiritual activities, defined as regular church attendance and daily prayers, will not have an impact on the perception of how HIV/ AIDS is acquired, as measured by the Perceived Risk of HIV scale, among Black/African American women between the ages of 25 and 44 living in a southern city.

Ha2: Religious/spiritual activities, defined as regular church attendance and daily prayers, will have an impact on the perception of how HIV/ AIDS is acquired, as measured by the Perceived Risk of HIV scale, among Black/African American women between the ages 25 and 44 living in a southern city.

The dependent variable is participants' perceptions of how HIV/AIDS is acquired. The independent variable is religious/spiritual activities, defined as regular church attendance and daily prayers.

RQ3: Does self-efficacy mediate the relationship between church attendance, daily prayers, and attitudes and beliefs of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors?

Ho3: Self-efficacy does not mediate the relationship between church attendance, daily prayers, and attitudes and beliefs of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors.

Ha3: Self-efficacy does mediate the relationship between church attendance, daily prayers, and attitudes and beliefs of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors.

The dependent variable is participants' attitudes and beliefs. The independent variable is church attendance and daily prayers. The mediating variable is self-efficacy.

RQ4: Does self-efficacy mediate the relationship between church attendance, daily prayers, and risk perception of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors?

Ho4: Self-efficacy does not mediate the relationship between church attendance, daily prayers, and risk perception of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors.

Ha4: Self-efficacy does mediate the relationship between church attendance, daily prayers, and risk perception of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors.

The dependent variable is participants' perceptions. The independent variable is church attendance and daily prayers. The mediating variable is self-efficacy.

For all research questions, the null hypothesis was rejected at the significance level of $p < 0.5$.

Population

Black/African American women living in a southern city, were the target population for this study. Florida was selected as the population of study because Florida has been heavily impacted by the HIV/AIDS epidemic. Florida continues to rank first in the United States with new HIV cases (4,800 in 2017), and the HIV mortality was 2,121 in 2016 (AIDSVu, 2019; Florida Department of Health, 2019). Approximately 130,000 individuals are living with the HIV disease in Florida, with 49% being Black, 29% White, and 20% Hispanic (Florida Department of Health, 2019). The disparity of HIV infection is also seen in Florida where the reported adult HIV infection case rate in 2013 among Black men was four times higher than the rate among White men, and the case

rate among Black women was 15 times higher than the rate among White women (Florida Department of Health, 2019).

From 1988–2010, HIV was the leading cause of death for Black people between ages 25 and 44 in Florida. In 2013, HIV dropped to the fifth leading cause of death among Black people. Among Black women between ages 25 and 44, HIV was reported to be the second leading cause of death in 2010 (Florida Department of Health, 2019). Participants were required to meet the following inclusion criteria: (a) reside in a certain southern city; (b) be between 25 and 44 years old, and (c) be a Black/African American woman.

Sampling and Sampling Procedures

Unrestricted in-person surveys were used as the sampling method for this study. A nonprobability sampling method allowed for any member of the targeted population to participate in this study. A convenience sample was used for this study because the population should be easy to reach, this method is relatively inexpensive, the effort is minimal, and the time to acquire study results was lower (Creswell, 2009). Interested participants were required to sign an informed consent form to participate in the study. Those who did not meet the inclusion criteria were excluded from the study.

Power Analysis for Regression Models

RQ1 was examined using multiple linear regression. In the first model, I tested whether church attendance and prayers (independent variables) predict attitude (dependent). In the second model, I tested whether church attendance and prayers (independent variables) predict belief of how HIV/AIDS is acquired (dependent). The α

for the test of these models was set at .05. To achieve power of .80 and a medium effect size (f2=.15), a minimum sample size of 68 was required to detect significant models (F (2,65) = 3.13).

RQ2 was examined using multiple linear regression. The model tested whether church attendance and prayers (independent variables) predict perceptions of how HIV/AIDS is acquired (dependent variable). The α for the test of this model was set at .05. To achieve power of .80 and a medium effect size (f2 = .15), a minimum sample size of 68 was required to detect a significant model (F (2,65) = 3.13).

RQ3 and RQ4 were also examined using hierarchical linear regression. In the first model, I tested whether self-efficacy mediates the relationship between church attendance and prayers (independent variables) and attitude (dependent). In the second model, I tested if self-efficacy mediates the relationship between church attendance and prayers (independent variables) and belief of how HIV/AIDS is acquired (dependent). The α for the test of these models was set at .05. To achieve power of .80 and a medium effect size (f2=.15), a minimum sample size of 85 was required to detect significant models (F (4,80) = 2.48).

Procedures for Recruitment, Participation, and Data Collection

The recruitment for this study took place online via various social media sites (i.e., Facebook and Instagram). Only individuals who met the inclusion criteria were invited to participate. The inclusion criteria included Black/African American women between the ages of 25 and 44 years of age living in a southern city.

Participants were informed about the potential risk and benefits of the study and that, at any given, time they had the right to withdraw from participation. Participants were also informed that the data collected would be confidential and would be kept in a locked safe during the data collection phase of the study but would be destroyed upon completion of the study. The participants were informed that the data collected would be anonymous because there would be no identifiable data information required to complete the survey. In addition, participants were given written instructions regarding the purpose of the study, directions on how to complete the survey, consent to participate, the risk and benefits of the study, guarantee of anonymity, and information on how the research findings would be disseminated. During data collection, I was present for questions via email. If participants me the set criteria, they were allowed to continue with the survey per the preset questions that were at the beginning of the survey-on-survey monkey. Prior to collecting data, I placed information on all social media (Facebook, Instagram, and LinkedIn) sites soliciting participants that were Black-African American women between the ages of 25 and 44 years and lived in a southern city.

Instrumentation and Operationalization of Constructs

Six questions from the Centrality of Religiosity (CSR) scale were utilized to measure the independent variables religious/spiritual activities defined as regular church attendance and daily prayers (Huber, 2012). CSR is a scale that has been utilized in over 100 studies and over 100,000 participants to measure the importance of religious meanings (Huber, 2012). The CSR measures the general strengths of five theoretical defined core dimensions of religiosity (Huber, 2012). The dimensions are public practice,

private practice, religious experience, ideology of religion, and the knowledge of religion (Huber, 2012). For this study, however, public practice and private practice were the only two theoretical constructs that were utilized to measure church attendance and daily prayers in the lives of Black/African American women living in a southern city.

Public practice is defined in the CSR scale as an outward action that is demonstrated by religious/spiritual individuals to show that they belong to a religious community by publicly participating in communal activities and religious rituals such as church attendance (Huber, 2012). This dimension can be easily measured by asking about the frequency in which an individual takes part in religious services (church attendance; Huber, 2012). Private practice is defined in the CSR as individualized activities or rituals such as prayers that are done in private to devote oneself to the transcendences well as to seek guidance about life matters. This dimension can be measured easily by asking about the frequency in which an individual takes part in rituals such as prayer. The CSR follows a probabilistic logic, meaning that individuals with higher scores are more grounded and influenced by their religious beliefs and practices (Huber, 2012). The validity of this scale has been empirically confirmed, with high correlations between the CSR and self-reports of the importance of religion in one's daily life. The coefficients range from 0.80 to 0.93 with the use of the individual dimensions and from 0.92 to 0.96 when the entire CSR is utilized (Huber, 2012).

The dependent variables, attitudes, and beliefs, were measured utilizing the Texas Christian University (TCU) Institute of Behavioral Research 17 item HIV/Hepatitis risk assessment scale. The scale focuses on injection drug use, sexual activities, and health

concerns and related attitudes (Simpson et al., 1994). For this study, however, only questions related to attitudes and concerns (beliefs) of how HIV/AIDS is acquired (how you can become infected with the virus) were used. The coefficient alpha is above 0.7. Individuals' attitudes and beliefs were measured by asking a series of questions (see Appendix b) with response options disagree strongly, disagree somewhat, not sure, agree somewhat, and agree strongly.

The dependent variable, perception, was measured by the perceived risk of HIV infection scale (PRHS), which is an eight-item scale that measures the likelihood estimates of being infected with HIV, perceptive judgments of being infected with HIV, and the salience of the risk (Napper et al., 2012). The PRHS has demonstrated good reliability (0.91) and concurrent criterion-related validity (x=0.88). Individuals' perceptions were measured by asking a series of questions (see Appendix c) with response options that included extremely unlikely, very unlikely, somewhat unlikely, very likely, and extremely likely (Napper et al., 2012). The higher scores on the PRHS have been positively associated with a higher number of sex partners, more encounters of unprotected sex, and having sex while under the influences of drugs or alcohol (Napper et al., 2012).

The Self-Efficacy Scale for HIV Risk Behaviors was utilized to measure if there was an association between self-efficacy, religious/spiritual activities, attitude, belief, and perception of how HIV/AIDS is acquired (Kang et al., 2004). The scale was developed to assess self-efficacy in HIV-injection and sex related behaviors. The scale consists of 20 total questions: 10 items assessing injection risk behavior and 10 items assessing sex risk.

The responses for each item range from 1 (not at all sure) to 5 (very sure), where higher scores denote higher self-efficacies for lower risk behaviors. The Self-Efficacy Scale for HIV Risk Behaviors has shown high levels of internal consistency; reliability was previously found to be a=.90 for injection and a=.86 for sexual items. For this study, only the questions assessing sexual risk behaviors were utilized to answer the research question (Kang et al., 2004).

Data Analysis

Data were analyzed by the statistical package for the social science (SPSS). This statistical package was selected because it is efficient, effective, reliable, and has built in techniques for data cleaning (Green & Salkind, 2012). SPSS has several statistical methods that allowed for graphs to be used to convey results of the study and to store output results in separate files for easy access. Prior to inputting collected data into the SPSS software for analysis, screening and cleaning of the raw data were performed manually as well as electronically utilizing the various techniques available in the SPSS software. In addition, data were checked manually to ensure that the participants met the inclusion criteria. The statistical analysis answered the four research questions. Descriptive statistics, including mean and standard deviation, were tabulated for interval and continuous variables, and percentages were tabulated for categorical variables. For Research Question 1 and 2, multiple linear regressions were conducted for each IV (church attendance and prayers). I conducted a multiple linear regression and hierarchical regression to analyze the findings of the survey data. Achi-square test was performed if

the assumption of the multiple linear regression was not met. Hierarchical linear regression was used to answer Research Question 3 and 4, as shown in Table 1.

Table 1

Research Questions and Variables

Research questions	Independent variable	Mediator	Dependent variable	Level of measurement	Statistical test
RQ 1. To what extent does religious/spiritual activities defined as regular church attendance and daily prayers have an impact on the attitude and beliefs of how HIV/AIDS acquired, measured by the TCU HIV/AIDS Risk Assessment scale	Church attendance and prayers		Attitudes and beliefs of how HIV/AIDS acquired	IV/categorical DV/interval	Multiple linear regression; will be conducted for each IV (church attendance and prayers); I will conduct 2 regressions, one for each DV's (attitude and belief) Chi-square test will be performed if the assumption of the multiple linear regression is not met.
RQ 2. To what extent does religious/spiritual activities defined as regular church attendance and daily prayers have an impact on the perception of HIV/AIDS acquisition, measured by the Perceived Risk of HIV Scale?	Church attendance and daily prayers		Perception how HIV/AIDS acquired	IV/categorical DV/interval	Multiple linear regression. Chi-square test will be performed if the assumption of the multiple linear regression is not met.
RQ 3. Does self-efficacy mediate the relationship between church attendance, daily prayers, and attitudes and beliefs of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors?	Church attendance and daily prayers	Self-efficacy	Attitudes and beliefs of how HIV/AIDS acquired	IV/categorical DV/interval	Hierarchical linear regression
RQ 4. Does self-efficacy mediate the relationship between church attendance, daily prayers, and risk perception of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors?	Church attendance and daily prayers	Self-efficacy	Perception of how HIV/AIDS acquired.	IV/categorical DV/interval	Hierarchical linear regression

Threats to Validity

The potential threat to internal validity for this study was non-response bias; therefore, to control for non-response bias, the surveys were short, reminders to respond were sent, and the respondents were reminded that the information provided would be confidential.

The convenience sampling method contributed to selection bias due to the overrepresentation of the selected demographic group and the underrepresentation of others, which could potentially impact the outcome (Creswell, 2009). Random sampling was not utilized. Therefore, the external validity and generalizability of the results could be compromised. Increasing the sample size above the estimated sample size during recruitment for the study could reduce the external validity threat because a large sample size will provide more reliable results with greater precision and power. To increase internal validity, all Black-African American women between the ages of 25 and 44 years of age were able to be part of the sample; no participant was chosen based on specific characteristics (Creswell, 2009).

Ethical Procedures

Voluntary participation in this research study was strictly enforced. Participants were informed about the potential risk and benefits of the study and that, at any given time, they had the right to withdraw from participation. Participants were also informed that the data collected would be confidential and would be kept in a locked safe during the data collection phase of the study but would be destroyed upon completion of the study. The participants were informed that the data collected would be anonymous

because there would be no identifiable data information required to complete the survey. In addition, participants were given written instructions on the purpose of the study, directions on how to complete the survey, consent to participate, the risk and benefits of the study, guarantee of anonymity, and information on how the research findings would be disseminated. During data collection, I was present for questions via email. If participants me the set criteria, they were allowed to continue with the survey per the preset questions that were at the beginning of the survey-on-survey monkey. Prior to collecting data, I placed information on all social media (Facebook, Instagram, and LinkedIn) sites soliciting participants that were Black-African American women between the ages of 25 and 44 years and lived in a southern city. Lastly, Walden University's code of ethics was examined and utilized in this study. Prior to beginning this study, the proposal was submitted and approved by Walden's University Institutional Review Board (IRB) prior to any data collection.

Summary

In this chapter, the research design was described as well as the rationale for the study selection. A detailed explanation of the dependent and independent variables was also provided along with information on the sampling procedure, how the sample was calculated, and the procedures that were used to recruit participants. Further, a description of the instruments that were used to measure the variables and the statistical measurements that were used were also detailed. In Chapter 4, I provide a detailed description of the results and findings of this study, including the descriptive and

inferential statistics, as well as the criteria for the interpretation of significant results as appropriate.

Chapter 4: Results

Introduction

The purpose of this analysis was to examine the relationships among religious/spiritual activities, defined as regular church attendance and daily prayers, and the attitudes, beliefs, and risk perceptions modified by self-efficacy of how HIV/AIDS is acquired. The exploratory data analysis was performed to present the demographic characteristics. The reliability analysis and tests of normality were performed, the assumptions of linear regression were tested, the hierarchical regression models were implemented to assess the research questions, and logistic regression was conducted where the assumptions of multiple linear regression were not met.

Research Questions

RQ1: To what extent do religious/spiritual activities, defined as regular church attendance and daily prayers, have an impact on the attitude and beliefs of how HIV/AIDS is acquired, as measured by the TCU HIV/AIDS Risk Assessment scale?

H01: Religious/spiritual activities, defined as regular church attendance and daily prayers, will not have an impact on the attitude and beliefs of how HIV/ AIDS is acquired as measured by the TCU HIV/AIDS Risk Assessment scale among Black/African American women between the ages of 25 and 44 living in a southern city.

RQ2: To what extent do religious/spiritual activities, defined as regular church attendance and daily prayers, have an impact on the perception of HIV/AIDS acquisition, as measured by the Perceived Risk of HIV Scale?

H02: Religious/spiritual activities, defined as regular church attendance and daily prayers, will not have an impact on the perception of how HIV/ AIDS is acquired as measured by the Perceived Risk of HIV scale among Black/African American women between the ages of 25 and 44 living in a southern city.

RQ3: Does self-efficacy mediate the relationship between church attendance, daily prayers, and attitudes and beliefs of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors?

H03: Self-efficacy does not mediate the relationship between church attendance, daily prayers, and attitudes and beliefs of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors.

RQ4: Does self-efficacy mediate the relationship between church attendance, daily prayers, and risk perception of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors?

H04: Self-efficacy does not mediate the relationship between church attendance, daily prayers, and risk perception of how HIV/AIDS is acquired among

Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors.

Data Collection

Descriptive Statistics and Demographic Characteristics

The data were collected between January 21, 2021, and April 18, 2021. The initial data set consisted of 237 participants. After removing missing values and incomplete cases, the data set included 151 participants measured by 10 risk perception questions, five self-efficacy questions, three belief questions, and two attitude questions of how HIV/AIDS is acquired. Most participants were between 35 and 44 years old (70.9%). The most common types of relationships were single (43.0%) and married (28.5%). More than 80% of participants had an income level between $30,000 and $99,999. For education level, 39.7% of participants held a bachelor's degree, 27.8% a master's degree, 15.2% a high school diploma, 14.6% a doctoral degree, and 2.6% preferred not to answer. Table 2 shows the characteristics of participants.

Table 2

Sociodemographic Characteristics of Participants

	N	%
Age		
25–34	42	27.8%
35–44	107	70.9%
Prefer not to answer	2	1.3%
Relationship		
Divorced	17	11.3%
Living with a partner	17	11.3%
Married	43	28.5%
Separated	6	4.0%
Single	65	43.0%
Widowed	3	2.0%
Income		
$100,000 or more	14	9.3%
$15,000–$29,999	11	7.3%
$30,000–$49,999	40	26.5%
$50,000–$74,999	55	36.4%
$75,000–$99,999	26	17.2%
Prefer not to answer	4	2.6%
Under $15,000	1	0.7%
Education		
Bachelor's degree (BS, BA)	60	39.7%
Doctoral degree (Ph.D./Ed.D./J.D./Pharm.D., etc.)	22	14.6%
High school diploma or GED	23	15.2%
Master's degree (MS, MA, MBA, etc.)	42	27.8%
Prefer not to answer	4	2.6%

The independent variables church attendance, daily prayers and a composite score self-efficacy as a potential mediator were measured on a Likert scale from 1 to 5, where 5 indicated more frequent attendance and prayers. The average values for these variables were above 4, indicating the high frequency of religious practicing and high level of self-efficacy among the responders. Table 3 shows the descriptive statistics for the independent variables.

Table 3

Descriptive Statistics for Independent Variables

Variable	n	Mean	Median	SD	Skewness	Kurtosis
Church attendance	151	4.13	5	1.24	–1.21	0.01
Daily prayers	150	4.61	5	0.83	–2.33	5.23
Self-efficacy	151	4.02	4.2	0.89	–1.04	0.87

Reliability Test of the Composite Scores

To perform regression analyses, composite scores of the responses were created. The results of the reliability analysis showed that for the belief subset, Question 3 showed a weak corrected item-total correlation and removing this variable from the composite score would have increased Cronbach's alpha to .835. The attitude subset returned a low Cronbach's alpha coefficient .197, indicating the answers to questions of this subset did not have internal consistency in measuring the constructs of the study. The validity analysis returned a strong correlation among the original variables and created composite scores. Table 4 shows the reliability test results.

Table 4

Reliability Tests Results

	N of items	Cronbach's alpha	Validity correlation
Risk perception	10	.74	$p < .01$
Self-efficacy	5	.72	$p < .01$
Belief	3	.62	$p < .01$
Attitude	2	.19	$p < .01$

Tests for Normality

Created composite scores as dependent variables and church attendance and daily prayers as independent variables returned significant Shapiro-Wilk test coefficients,

indicating that the variables were not normally distributed. Table 5 shows the results of the Shapiro-Wilk normality test.

Table 5

Shapiro-Wilk Normality Test

	Statistic	df	Sig.
Church attendance	.69	150	<.01
Daily prayers	.53	150	<.01
Risk perception	.98	150	.045
Self-efficacy	.89	150	<.01
Belief	.91	150	<.01
Attitude	.71	150	<.01

Assumptions Test

Multiple linear regression states assumptions of linearity, independence of observations, absence of multicollinearity, homoscedasticity, and normality of residuals. To test the assumption of linearity between dependent and independent variables, Pearson correlation test was conducted to measure linear relationships among variables. The dependent variables attitude, beliefs, and risk perception were not significantly correlated with church attendance and daily prayers, as can be seen in Table 6. Only attitude was significantly correlated with independent variables. Additionally, the matrix scatterplot graph was constructed (see Appendix I). The pattern of the relationships showed a lack of linearity; therefore, the assumption was not met. Because the assumption of linear relationships between dependent and independent variables was not met, logistic regression was performed to assess the research questions.

Table 6

Pearson Correlation Tests

	Variable	1	2	3	4	5
1	Church attendance					
2	Daily prayers	.47**				
3	Risk perception	-.05	-.08			
4	Self-efficacy	-.04	.08	-.04		
5	Belief	.04	-.04	.56**	.01	
6	Attitude	-.18*	-.43**	.19*	-.18*	.00

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

A binary logistic regression makes four assumptions about the underlying data: (a) The response variable should be measured on a dichotomous scale. The dependent variables of attitude, belief, and risk perception were recoded to a binary categorical scale with values: zero (0) 'Below Average', and one (1) 'Above Average.' (b) The explanatory variables are continuous or categorical. The independent variables church attendance, daily prayers were measured on an ordinal scale; the composite score self-efficacy was measured on a continuous scale. (c) The independence of observations. By the design of the experiment, the observations were independent. (d) There needs to be a linear relationship between any continuous independent variables and the logit transformation of the dependent variable. This assumption was assessed by using the Box-Tidwell transformation. The results of the tests showed statistically non-significant coefficients of the interactions of the transformed variables with original variables for models of risk perception, and attitude. The assumption for these models was met. The

model for beliefs returned significant interaction coefficients, therefore, the assumption for this model was not met as can be seen below in Table 7.

Table 7

Significance of the Box-Tidwell Transformations in the Models

Variable	Risk perception (binary)	Beliefs (binary)	Attitude (binary)
Interaction of log-transformed church attendance with original church attendance	.63	.03	.17
Interaction of log-transformed daily prayers with original daily prayers	.46	.18	.92
Interaction of log-transformed self-efficacy with original self-efficacy	.76	.05	.19

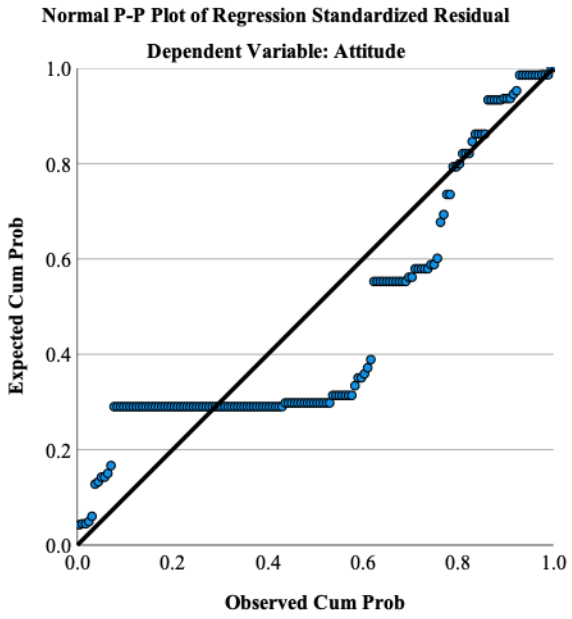
Results

Research Question 1

Because church attendance and daily prayers were significantly correlated with Attitude, multiple linear regression was performed. The results revealed that daily prayers significantly predicted attitude, $b = -.85$, $t(147) = -5.23$, $p < .001$. The diagnostics plots revealed violations of regression assumptions, indicating misspecification of the model as can be seen in Figure 1 below.

Figure 1

Normal P-P Plot of the Model: Attitude ~ Daily Prayers and Church Attendance



Therefore, the dependent variable Attitude was recoded into a binary categorical one with values zero (0) 'Below Average' (n = 111, 73.5%) and one (1) 'Above Average' (n = 40, 26.5%), and binominal logistic regression was performed. The logistic regression model was statistically significant, Omnibus Test $\chi^2(2) = 19.90$, $p < .001$. The model explained almost 20% (Nagelkerke $R^2 = .18$) of the variance in attitude and correctly classified 76.7% of cases. Participants with higher daily prayers (*OR* = 0.32, *95%* CI [0.18, 0.57],$p < .001$) were less likely to exhibit an Attitude above average. Church attendance (*OR*= 1.32, 95% CI [0.88, 1.96], $p = .17$) did not have a statistically significant effect on attitude as is shown in Table 8 below. The null hypothesis was rejected, and it was concluded that religious/spiritual activities, defined as daily prayers, had an impact on the attitude of how HIV/ AIDS is acquired measured by the TCU

HIV/AIDS Risk Assessment scale among Black/African American women between the ages of 25 and 44 living in a southern city.

Table 8

Logistic Regression Coefficients for the Model With Dependent Variable: Binary Attitude

	B	SE B	Wald	p	OR	95% CI OR
Church attendance	0.278	0.203	1.871	.17	1.321	0.89, 1.97
Daily prayers	-1.124	0.288	15.236	**<.001**	0.325	0.18, 0.57
Constant	2.893	1.107	6.83	**.01**	18.053	

Note. SE = standard error. OR = odd ration. CI = confidence interval

Table 9

Logistic Regression Model With Dependent Variable: Binary Attitude

	B	SE B	Wald	p	OR	95% CI OR
Church attendance	0.27	0.20	1.87	.17	1.32	0.89, 1.97
Daily prayers	-1.12	0.28	15.23	**<.01**	0.32	0.18, 0.57
(Constant)	2.89	1.10	6.83	**<.01**	18.05	

Note. SE = standard error. OR = odd ratio. CI = confidence interval

It was previously found that the dependent variable Beliefs was not linearly correlated with independent variables church attendance, daily prayers, and self-efficacy; therefore, the dependent variable beliefs was recoded into a binary categorical one with values zero (0) 'Below Average' (n = 63, 41.7%) and one (1) 'Above Average' (n = 88, 58.3%), and binominal logistic regression was performed. The logistic regression model was statistically non-significant, Omnibus Test $\chi 2(2) = 0.40$, p = .81. The model explained less than 1% (Nagelkerke R2 = .004) of the variance in belief and correctly classified 58.7% of cases. Church attendance (OR= 1.03, 95% CI [0.76, 1.38], p = .83)

and daily prayers (OR= 0.86, 95% CI [0.54, 1.36], p = .54) did not have significant effect on Belief as is shown in Table 10 below.

Table 10

Logistic Regression Model With Dependent Variable: Binary Belief

	B	SE B	Wald	p	OR	95% CI OR
Church attendance	0.03	0.15	0.04	.83	1.03	0.76, 1.38
Daily prayers	-0.14	0.23	0.39	.54	0.86	0.54, 1.36
(Constant)	0.89	0.98	0.83	.36	2.42	

Note. SE = standard error. OR = odd ratio. CI = confidence interval

Research Question 2

It was previously found that the dependent variable risk perception was not linearly correlated with independent variables church attendance, daily prayers, and self-efficacy. Multiple regression analysis confirmed that daily prayers and church attendance did not significantly predict participants' risk perception. The results of the regression model indicated that the two predictors explained 0.7% of the variance ($R2 = .006$, $F (2, 147) = .46$, $p = .63$). As can be seen in Table 11 below, it was found that both variables were statistically non-significant in predicting risk perception. The regression assumptions, independence and normality of residuals, were generally met as can be seen in Figure 2 and Figure 3. Recoding the dependent variable into a binary categorical one did significantly improve predictability: the binary logistic regression was statistically non-significant (Omnibus Test $\chi2(2) = 1.57$, $p = .45$). There was not enough evidence to reject the null hypothesis.

Table 11

Risk Perception Regression Model Coefficients

	B	SE	Beta	t	p
(Constant)	25.32	2.74		9.21	<.01
Church attendance	-.09	.44	-.02	-.20	.83
Daily prayers	-.48	.66	-.06	-.72	.46

Note. SE = standard error

Figure 2

Normal P-P Plot of the Model: Risk Perception ~ Daily Prayers and Church Attendance

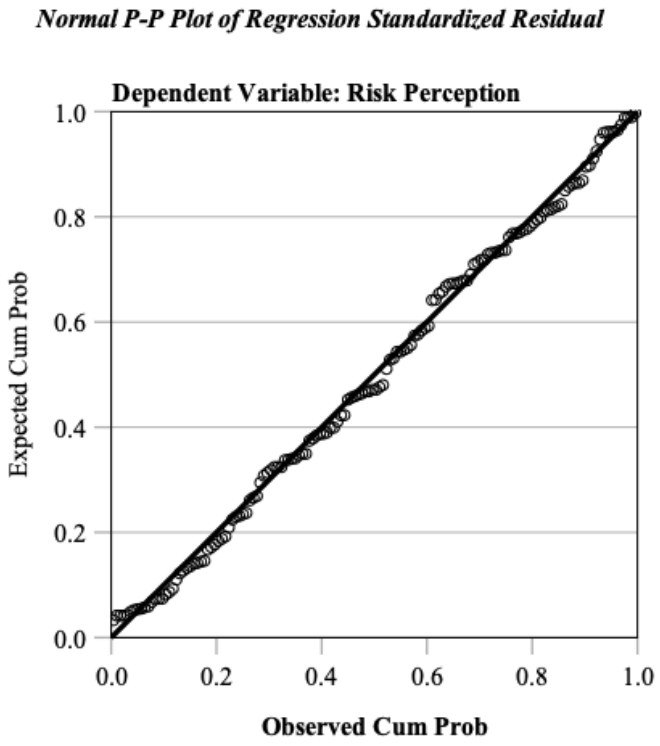
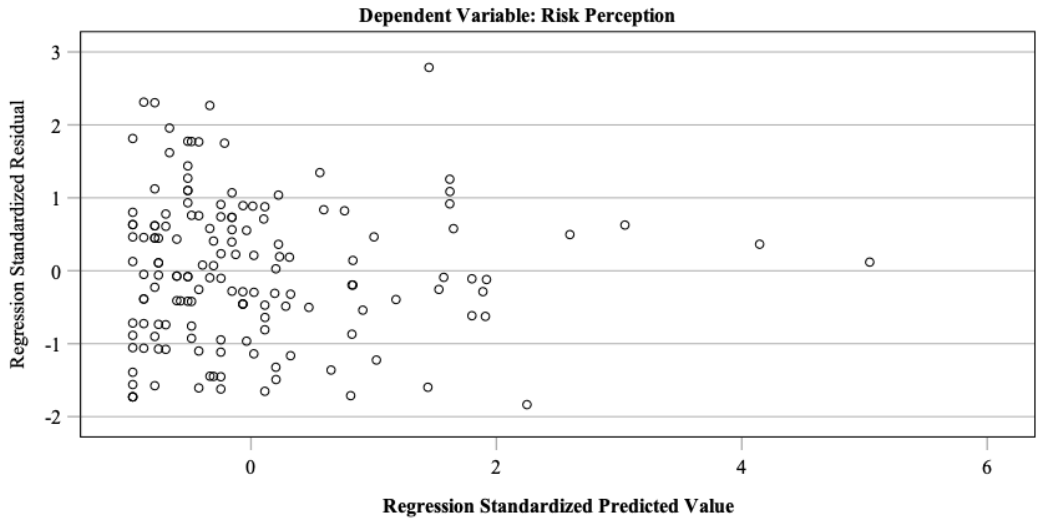


Figure 3

Scatterplot of Residuals in Risk Perception Model



Research Question 3

The hierarchical binary logistic regression was performed to analyze the effect of self-efficacy as a mediator on the dependent variables, attitude and belief. It was found that self-efficacy significantly affected the likelihood of attitude to be below or above average (OR= 0.91, 95% CI [0.84, 0.99], p = .04); participants with higher self-efficacy were less likely to exhibit an attitude above average. The model with included self-efficacy was statistically significant, Omnibus Test $\chi 2(3) = 24.01$, $p<.01$. The model explained more than 20% (Nagelkerke R2 = .21) of the variance in attitude and correctly classified 78.0% of cases. The independent variable, self-efficacy, significantly reduced the importance of the independent variable, church attendance; however, it was already statistically non-significant (from OR = 1.32, 95% CI [0.88, 1.96], p = .17to OR = 1.29, 95% CI [0.86, 1.92], p = .22). Self-efficacy did not mediate daily prayers as can be seen

in Table 12. Self-efficacy was found a significant predictor of attitude. The null hypothesis was rejected, and it was concluded that there was an association between church attendance, daily prayers, and attitude, as modified by self-efficacy, of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a certain Florida city as measured by the Self-Efficacy Scale for HIV Risk Behaviors.

Table 12

Logistic Regression Model With Dependent Variable: Binary Attitude With Self-Efficacy as a Mediator

	B	SE B	Wald	p	OR	95% CI OR
Church attendance	0.25	0.21	1.49	.22	1.29	0.86, 1.92
Daily prayers	–1.13	0.30	14.47	<.01	0.32	0.18, 0.58
Self-efficacy	–0.09	0.04	4.11	.04	0.91	0.84, 0.99
(Constant)	4.82	1.53	9.87	<.01	123.69	

Note. SE = standard error. OR = odd ratio. CI = confidence interval

As can be seen in Table 13, it was also found that self-efficacy did not mediate the relationship between religious activities and beliefs of how HIV/AIDS is acquired. The model with included self-efficacy was statistically non-significant, Omnibus Test $\chi 2(3) = .72$, $p = .868$. The model explained less than 1% (Nagelkerke R2 = .01) of the variance in belief and correctly classified 58.7% of cases. Self-efficacy was not found to be a significant predictor of belief.

Table 13

Logistic Regression Model With Dependent Variable: Binary Belief With Self-Efficacy as a Mediator

	B	SE B	Wald	p	OR	95% CI OR
Church attendance	0.04	0.15	0.07	.80	1.04	0.77, 1.40
Daily prayers	-0.16	0.23	0.46	.50	0.85	0.54, 1.34
Self-efficacy	0.02	0.04	0.32	.57	1.02	0.94, 1.09
(Constant)	0.49	1.19	0.17	.68	1.64	

Note. SE = standard error. OR = odd ratio. CI = confidence interval

Research Question 4

A hierarchical linear regression model was used to test whether self-efficacy mediated the relationship between religious activities and participants 'risk perception of how HIV/AIDS is acquired. As can be seen in Table 14, it was found that self-efficacy did not significantly mediate this relationship (R2 = .01, F (3, 146) = .36, p = .78). Self-efficacy was not found a significant predictor of risk perception. The regression assumptions of linearity, independence, and normality of residuals were generally met. There was not enough evidence to reject the null hypothesis.

Table 14

Hierarchical Model's Summary

Coefficients for linear models with dependent variable: Risk perception

Model	Variable	B	SE	Beta	t	p
Model 1	(Constant)	25.33	2.75		9.22	<.01
R2 = 0.006	Church attendance	-0.09	0.44	-.02	-0.21	.84
	Daily prayers	-0.48	0.66	-.07	-0.73	.47
Model 2	(Constant)	26.17	3.42		7.65	<.01
R2 = 0.007	Church attendance	-0.11	0.44	-.02	-0.24	.81
	Daily prayers	-0.45	0.67	-.06	-0.68	.50
	Self-efficacy	-0.05	0.11	-.03	-0.42	.68

Recoding the dependent variable into a binary categorical one did significantly improve predictability. The binary logistic regression remained statistically non-significant (Omnibus Test $\chi 2(3) = 1.57$, $p = .66$). This can be observed in Table 15 below.

Table 15

Logistic Regression Model With Dependent Variable: Binary Risk Perception With Self-Efficacy as a Mediator

	B	S.E.	Wald	p	Exp(B)	95% CI OR
Church attendance	-0.06	0.15	0.17	.68	0.94	0.70, 1.26
Daily prayers	-0.19	0.23	0.71	.40	0.82	0.52, 1.29
Self-efficacy	0.00	0.04	0.00	.98	1.00	0.92, 1.07
Constant	1.17	1.20	0.95	.33	3.21	

Note. SE = standard error. OR = odd ration. CI = confidence interval

Table 16

Logistic Regression Model With Dependent Variable: Binary Risk Perception With Self-Efficacy as a Mediator

	B	S.E.	Wald	p	OR	95% CI OR
Church attendance	-0.06	0.15	0.17	.68	0.94	0.70, 1.26
Daily prayers	-0.19	0.23	0.71	.40	0.82	0.52, 1.29
Self-efficacy	0.00	0.04	0.00	.98	1.00	0.92, 1.07
(Constant)	1.17	1.20	0.95	.33	3.21	

Note. SE = standard error. OR = odd ratio. CI = confidence interval

Summary

The purpose of this analysis was to examine the relationships among religious/spiritual activities, defined as regular church attendance and daily prayers, and the attitude, beliefs, and risk perception as modified by self-efficacy of how HIV/AIDS is

acquired. I also examined whether self-efficacy mediated the relationship between church attendance and daily prayer, and attitudes and beliefs, as well as risk perception about how HIV/AIDS is acquired. The linearity assumption was not met for the majority of the variables; therefore, a binary logistic regression was performed to assess most of the research questions.

For RQ1, it was found that participants with higher daily prayers (OR = 0.32, 95% CI [0.18, 0.57], $p < .001$) were less likely to exhibit an attitude above average. Church attendance (OR = 1.32, 95% CI [0.88, 1.96], $p = .17$) did not have a statistically significant effect on attitude. Church attendance (OR = 1.03, 95% CI [0.76, 1.38], $p = .83$) and daily prayers (OR = 0.86, 95% CI [0.54, 1.36], $p = .53$) did not have significant effects on belief. Thus, the null hypothesis for RQ1 was rejected.

For RQ2, it was found that church attendance and daily prayers did not affect participants' risk perception. Multiple linear regression model was statistically non-significant ($R2 = .006$, $F (2, 147) = .46$, $p = .63$). Recoding the dependent variable into a binary categorical one did significantly improve predictability: the binary logistic regression was statistically non-significant (Omnibus Test $\chi2(2) = 1.57$, $p = .45$). There was not enough evidence to reject the null hypothesis for RQ2.

For RQ3, it was found that self-efficacy significantly affected the likelihood of attitude to be below or above average (OR = 0.91, 95% CI [0.84, 0.99], $p = .04$). Participants with higher self-efficacy were less likely to exhibit attitude above average. It was also found that self-efficacy did not mediate the relationship between religious

activities and beliefs of how HIV/AIDS is acquired (Omnibus Test $\chi^2(3) = .72$, $p = .86$). Therefore, the null hypothesis for RQ3 was rejected.

For RQ4, it was found that self-efficacy did not mediate church attendance or daily prayers in explaining participants' risk perception. Both linear ($R^2 = .007$, F (3, 146) = .36, $p = .78$) and binary logistic (Omnibus Test $\chi^2(3) = 1.57$, p = .66) models were statistically non-significant. Thus, there was not enough evidence to reject the null hypothesis for RQ4. The reliability analysis showed that the attitude sub-set had a low Cronbach's Alpha coefficient .19, indicating that the answers to questions of this sub-set did not have internal consistency in measuring the constructs of the study. In the next chapter, I discuss the conclusions of the study and presents recommendations for future research.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this analysis was to examine the relationships among religious/spiritual activities, defined as regular church attendance and daily prayers, and the attitudes, beliefs, and risk perceptions as modified by self-efficacy of how HIV/AIDS is acquired. I further examined whether self-efficacy mediated the relationship between church attendance and daily prayer, as well as attitudes, beliefs, and risk perceptions about how HIV/AIDS is acquired. The findings of this study contribute to the public health field by providing evidence of the individual views of Black/African American women on how their spiritual/religious practices influence their attitudes, beliefs, and self-perceptions. The findings of this study also reveal how self-efficacy associated with HIV is acquired. This may serve beneficial to public health practitioners, educators, public health funding agencies, and program developers as they develop interventions to address HIV in Black/African American women as well as bridge the gap in the collaboration efforts between public health and the Black community. This study was further intended to provide insight into potential ways to reduce exposure to risk of HIV/AIDS acquisition in this target population.

The results from this cross-sectional study may help inform public health researchers on information that can be collected for future studies and for public health planning (Lee, 1994). I selected this research design because it was inexpensive and less time consuming and much less unwieldy compared to other research methods (Creswell, 2009). Additionally, this design allowed for a relatively large number of participants to

be sampled conveniently and, thus, increase the level of statistical power that could be achieved in the analysis.

Based on the results of this study, it was revealed that daily prayers significantly predicted attitude. Logistic regression analysis was used to test whether daily prayers and church attendance significantly predicted participants' risk perceptions. The null hypothesis was rejected, and I concluded that religious/spiritual activities, defined as daily prayers, had an impact on the attitude of how HIV/AIDS is acquired as measured by the TCU HIV/AIDS risk assessment scale among Black/African American women between the ages of 25 and 44 living in a southern city. Daily prayers significantly predicted attitude ($p < 0.01$). Participants with higher daily prayers (OR = 0.32, 95% CI [0.18, 0.57], $p < .001$) were less likely to exhibit an attitude above average. Church attendance (OR = 1.32, 95% CI [0.88, 1.96], $p = .17$) did not have a statistically significant effect on attitude. Church attendance (OR= 1.03, 95% CI [0.76, 1.38], $p = .83$) and daily prayers (OR = 0.86, 95% CI [0.54, 1.36], $p = .54$) did not have significant effect on belief. Daily prayers and church attendance did not significantly predict participants' risk perceptions. Self-efficacy significantly affected the likelihood of attitude to be below or above average (OR = 0.91, 95% CI [0.84, 0.99], $p = .04$); participants with higher self-efficacy were less likely to exhibit an attitude above average. Self-efficacy did not mediate daily prayers. Self-efficacy was found a significant predictor of attitude.

The remainder of this chapter contains a discussion of the significance of these findings and their implications. First, I present an interpretation of the findings and their

alignment with the literature presented in Chapter 2. Consideration is then given to limitations presented in Chapter 1 and the extent to which they influenced the generalizability of these findings. I offer recommendations based on the discussion of these limitations and the extent to which these findings generate directions for future research. I also include implications of these findings for practice, research, and theory. This chapter concludes with a brief summary and outline of key points.

Interpretation of the Findings

This section contains a discussion of the potential reasons why the results emerged in the manner in which they did, as well as their ability to extend or align with evidence presented in the literature review. RQ1 asked, "To what extent do religious/spiritual activities, defined as regular church attendance and daily prayers, have an impact on the attitudes and beliefs of how HIV/AIDS is acquired, as measured by the TCU HIV/AIDS risk assessment scale?" I hypothesized that religious/spiritual activities would have a significant impact on the attitudes and beliefs of how HIV/AIDS is acquired as measured by the TCU HIV/AIDS risk assessment scale among Black/African American women between the ages of 25 and 44 living in a southern city. This hypothesis was partially supported, with significant relationships shown between attitude and church attendance as well as attitude and daily prayers. Participants with higher church attendance and daily prayers were more likely to control their activities. Daily prayers and church attendance, however, did not significantly predict beliefs. This finding suggests that daily prayers and church attendance primarily affect the ability to control

and regulate oneself, rather than affecting one's belief system. This finding is important for understanding how religious activities influence one's behaviors.

This finding confirms Hutson et al. (2018) and Porter et al. (2017), who studied the relationship between spirituality, HIV-related stigma, and well-being among PLWH. Hutson et al. examined spiritual well-being and stigma among 216 PLWH in the Appalachian South region of the United States, speculating that this was an HIV-prevalent area in which HIV-related stigma was high due to religious conservatism; paradoxically spirituality itself might be an effective coping mechanism for PLWH. Existential well-being was negatively correlated to HIV-related stigma in this population. Additionally, women or HIV-positive women—at least in the sample—may tend to be more religious and/or derive greater benefits from religion (Hutson et al., 2018). In the current study, spiritual activities primarily serve to increase the ability to regulate one's behaviors. Spiritual activities are not, however, directly related to knowledge of HIV/AIDS acquisition. The researchers of this study were able to extend previous evidence regarding stigmas and the manner in which they tend to manifest within religious settings and environments.

RQ2 asked, "To what extent do religious/spiritual activities, defined as regular church attendance and daily prayers, have an impact on the perception of HIV/AIDS acquisition, as measured by the perceived risk of HIV scale?" I hypothesized that religious/spiritual activities would have a significant impact on the perception of how HIV/AIDS is acquired measured by the perceived risk of HIV scale among Black/African American women between the ages of 25 and 44 living in a southern city. The rationale

for this hypothesis was that, in many religious facilities, sexual behaviors, activities, and risks are discussed, which may influence the extent to which individuals believe they are at risk of acquiring a sexually transmitted disease.

Multiple regression analysis confirmed that daily prayers and church attendance did not significantly predict participants' risk perceptions. Spiritual and religious activities did not significantly impact perceptions of how HIV/AIDS is acquired. This is likely because women in this sample already had a firm understanding of how HIV/AIDS is acquired. Most adult women are aware that HIV/AIDS is transmitted through bodily fluids (Porter et al., 2017). Religious activities and church attendances generally do not provide educational information pertaining to the causes of sexually transmitted diseases. Understanding women's baseline level of knowledge pertaining to HIV/AIDS may have helped improve the ability to determine whether religious activities affected their cognizance of the causes of these diseases/infections, as would understanding the content of church sessions. Additionally, understanding the extent to which each participant's religious facility did discuss issues such as sexual activity and risk factors for HIV/AIDS may have led to an increased understanding of the role religion plays in the knowledge and perception of disease risk.

These findings conflict with previous research, such as Porter et al. (2017). African American churches as institutions may actually contribute to HIV-related stigma in African Americans due to conservative religious views about HIV acquisition and sexual orientation, especially those held by pastors (Payne-Foster et al., 2018; Quinn et al., 2016). This perceived stigma may be one reason church activities were not

significantly related to views of HIV/AIDS acquisition. Whether these stigmas existed in the participants of this study or their respective religious facilities was not measured, and the inclusion of this variable may have helped provide further insight into the manifestation of real or perceived sources of discrimination associated with sexual activities.

RQ3 asked, "Is there an association between church attendance, daily prayers, and attitudes and beliefs, as modified by self-efficacy, of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors?" It was hypothesized that there is a significant association between church attendance, daily prayers and attitudes and beliefs, as modified by self-efficacy, of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors. The rationale for this hypothesis was that evidence presented in Chapter 2 was heavily laden with the discussion of self-efficacy and its role in safe sexual practices. In this study, sexual behaviors were not directly discussed, nor was self-efficacy for safe sexual activities. It was still believed, however, that self-efficacy would be a significant mediator of the relationship between religious activities and knowledge of HIV/AIDS acquisition.

It was found that self-efficacy significantly affected the likelihood of attitude to be below or above average. The null hypothesis was rejected, and it was concluded that there was an association between church attendance, daily prayers, and attitude, modified by self-efficacy of how HIV/AIDS is acquired among Black/African American women

between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors. Participants with higher self-efficacy were less likely to exhibit attitude above average. Self-efficacy did not mediate the relationship between religious activities and belief of how HIV/AIDS is acquired, which was likely due to the fact that religious activities did not significantly predict beliefs about how HIV/AIDS is acquired. It was also found that self-efficacy did not mediate the relationship between religious activities and beliefs of how HIV/AIDS is acquired. Accordingly, self-efficacy would not have an influence on a statistically insignificant relationship. Self-efficacy is also not linked with knowledge. Self-efficacy pertains to the realistic belief in one's ability to accomplish a particular task. Therefore, whether or not self-efficacy plays a role in knowledge and awareness of HIV/AIDS acquisition and regulates one's behaviors related to these variables was not clear from the results of this study.

These findings support evidence presented in Chapter 2. The sexual health outcomes of Black women may be partly in the hands of Black men's views, justifying why some scholars stress the importance of sexual self-efficacy in young Black women (Collins et al., 2017). In the current study, self-efficacy was not associated with church activities or knowledge of HIV/AIDS acquisition, and the ability for these findings to extend previous research and theory was potentially limited based on the lack of inclusion of variables identified in previous research that have linked self-efficacy to factors like sexual risk-taking.

For this study, however, masculinity beliefs were not studied as they have been in previous studies. One of the reasons that self-efficacy was believed to be linked to

knowledge of HIV/AIDS acquisition is that the church environment is traditionally associated with patriarchal values and the dissemination of masculine-influenced beliefs about sexual behaviors. Vincent et al. (2016) found that the male partner's masculinity beliefs affected the condom-related beliefs of both partners in minority couples, and primarily Black college women believed that condoms were a male responsibility (McLaurin-Jones et al., 2016); thus, it is understandable that sexual self-efficacy in African American women would be an area for intervention for some researchers (Collins et al., 2017). In other words, if Black women took control of condom negotiation with full awareness of their HIV risk, they could potentially lower it, a phenomenon that would require sexual self-efficacy. The reason why findings from this study did not align with previous research may be due to the fact that issues like condom negotiation were not measured. Additionally, the presence of patriarchal values and the dissemination of masculine beliefs in the religious institutions of women in this study were also not measured, thus preventing the ability to determine whether there is a significant link between these variables.

RQ4 asked, "Is there an association between church attendance, daily prayers, and perception, as modified by self-efficacy, of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city as measured by the self-efficacy scale for HIV Risk Behaviors?" It was hypothesized that there is a significant association between church attendance, daily prayers, and perception, as modified by self-efficacy, of how HIV/AIDS is acquired among Black/African American women between the ages of 25 and 44 living in a southern city

as measured by the self-efficacy scale for HIV Risk Behaviors. As with hypothesis three, the rationale for this variable was that previous research has linked safe sexual practices with self-efficacy in young African American women (Collins et al., 2017). It was found that self-efficacy did not mediate church attendance or daily prayers in explaining participants' risk perception.

Self-efficacy did not significantly mediate the relationship between religious activities and risk perceptions pertaining to how HIV/AIDS was acquired. It is evident that church activities and self-efficacy are not theoretically linked with knowledge of how HIV/AIDS is acquired. Self-efficacy may influence one's belief in their risk of acquiring HIV/AIDS or ability to prevent this disease/infection. In this study, however, only knowledge of how HIV/AIDS is acquired was measured, and it is likely that only an understanding of how this disease/infection is transmitted is sufficient to explain this outcome. Church activities and self-efficacy do not appear to be related to knowledge of disease acquisition. The reasons why the findings were not in agreement with evidence presented in Chapter 2 are potentially due to characteristics of the sample in this study as well as the lack of measurement of the same variables (e.g., masculine values and attitudes toward sex and sexual risk-taking), as has been shown in previous research.

Evidence from Chapter 2 showed a steady belief in one's ability to exert control over one's safe-sex behavior and motivation in the context of one's given environment (Bandura, 1986; Collins et al., 2017; McLaurin Jones et al., 2016). Addoh et al. (2017) reported a significant link between self-efficacy for partner disapproval (ability to use a condom despite partner disapproval) and safe-sex practice, yet male beliefs in minority

couples tended to influence the condom-related beliefs of female partners (Vincent et al., 2016). Black women may engage in condomless sex due to the beliefs of their male partner. Condom use, however, was not assessed in the current study. The ability to exert control over safe sexual behaviors was only indirectly measured in this study; thus, further research is needed in order to determine how religious activities influence this sense of control.

Interpretation of Findings in the Context of Selected Theory

Results from this study may be partially explained based on the theoretical framework that was identified in Chapter 1. Specifically, findings from this study have potential implications for SCT. SCT is one of the most widely used models of STD transmission risk behaviors, because its concept of self-efficacy provides a useful framework for understanding an individual's passive or active response—their behavior—towards the STD-related risks of their social environment (Bandura,1994). Although it is evident that HIV-associated environmental and cultural factors such as socioeconomic and educational disparity are widespread for, and largely beyond the control of, African American women at risk, self-efficacy may help explain why some women respond more adaptively to these adverse circumstances (e.g., Burke-Miller et al., 2016; Logie et al., 2016). Further research is still needed, however, in order to assess how self-efficacy is linked with religious activities and knowledge of HIV/AIDS acquisition in African American women.

As would perhaps be expected, HIV-related public health efforts have historically focused on educating the public about HIV transmission, and more recently in the case of

African Americans, on providing additional HIV-related resources in churches (Williams et al., 2016; Wingood et al., 2019). Differences in self-efficacy—particularly sexual self-efficacy in women—may partly explain why the racial disparity in HIV prevalence persists and is expected to continue for African American women (CDC, 2018; Fletcher et al., 2016; Wiewel et al., 2016). Results from this study potentially shed some light on the role those religious activities play in the perceptions of safe sexual behaviors and knowledge of HIV/AIDS acquisition and its causes amongst young African American women.

While the link between self-efficacy and knowledge of how HIV/AIDS is acquired was not supported by the study results, they do add to the discussion as to the potential for this theory to be incorporated into public health interventions aimed at prevention. In the context of HIV prevention, individuals may undergo a cognitive negotiation that is determined by their available resources—not only knowledge, but also self-efficacy—that results in a behavioral outcome to use or forego a condom (Bandura, 1994). Increasing self-efficacy may be an important way in which to promote self-control and regulate behaviors related to safe sexual practices amongst young African American women. The following section contains a discussion of limitations that may have been present in this research.

Limitations of the Study

Although results from this study are believed to offer important insight into the relationship between church activities, self-efficacy, and knowledge of HIV/AIDS acquisition, some limitations were present that warrant consideration. First, because this

was a nonexperimental quantitative study that utilized a convenience sample without random selection, the robustness of the study may be questioned (Creswell, 2009). Selection bias was potentially another limitation to this study because only Black/African American women between the ages of 25 and 44 years of age were selected to participate, thus potentially producing an inaccurate conclusion about Black/African Americans in general. Recall bias could also have been a limitation because the participants had to recall behaviors that occurred within the last 12 months and may have a hard time remembering what their thoughts were during their sexual encounter (Creswell, 2009). Therefore, the scores of the participants may be altered based on their inability to recall what behaviors or beliefs influenced their actions to practice behaviors that decrease their risk of being infected with HIV (Creswell, 2009).

The generalizability of this study may also be a concern because the study targeted Black/African American women ages 25-45 only within a Florida city. According to the CDC (2009), however, Black/African American women between the ages of 25 and 44 are leading the numbers of HIV infection and AIDS-related deaths. Therefore, targeting Black/African American between these ages living in Florida brings great significance to this study because Florida ranks number three amongst the states with the highest HIV/AIDS rates (CDC, 2011a).

Recommendations

Based on the limitations discussed above, it is recommended that future research be implemented that explores these variables in samples beyond that of the context of this study. The use of randomization or stratified/clustered random sampling may be of

benefit in future studies. Additionally, sampling participants outside of the geographic location may also improve the generalizability of these findings, as geography may be related to sociocultural beliefs about religion and sexual activities. It is also recommended that qualitative data collection and analysis be implemented in future studies in order to gain an understanding as to why hypotheses in this study were or were not supported. Including qualitative data, such as via interviews, may help provide an understanding as to how the instrument items were interpreted and the manner in which these participants believed that religious activities did or did not impact their knowledge of HIV/AIDS acquisition.

Furthermore, qualitative data may help triangulate findings and provide more reliable evidence of the links between the variables in this study. From a practical standpoint, these findings appear to demonstrate that religion is related to greater self-control and self-regulation. Accordingly, for individuals who may be identified as high-risk for HIV/AIDS acquisition, these findings may indicate that spiritual intervention and religion are potentially worthwhile intervention components.

Implications

Results from this study have important implications for the understanding of the role spiritual activities play in self-control, as well as knowledge of HIV/AIDS acquisition. As evidenced by the data presented in Chapters 1 and 2, Black/African American women are still disproportionately affected by HIV despite the many studies that have been conducted to better understand their HIV risk, their HIV health literacy, and their ability to engage in conversations about HIV (Davis, 2014). Additionally,

several studies have been conducted on the role the Black church has or should have on promoting HIV awareness, HIV/AIDS prevention, and behavioral change (Davis, 2014; Szaflarski, 2013). This study, however, did not examine the role of the church and its religious doctrine on how it may influence HIV attitude, beliefs, self-perception, and self-efficacy of how HIV/AIDS is acquired.

Based on the study findings, I was able to extend the literature pertaining to spirituality and self-control in regard to sexual behaviors. Numerous studies have been conducted to explain the impact spirituality and religion have on PLWH, but very little research has been conducted to explore how the spirituality/religiosity of a Black/African American woman influences her attitude, beliefs, self-perception, and self-efficacy of how HIV/AIDS is acquired (Szaflarski, 2013). For example, Szaflarski found that PLWH who are regularly involved in spiritual and religious activities have a better quality of life and can cope with stressors, such as stigma and discrimination, more effectively. Szaflarski, concluded that there is a need for more research to be conducted that focuses on vulnerable populations with the development of interventions that are population specific but are on the individual as well as the community level. Hutson et al. (2018) found that women reported higher levels of religious well-being when compared to men and that there was no significant correlation found between being religious and stigma. The researchers concluded, however, that their findings supported the importance of defining spirituality and differentiating between cultural religious practices and personal beliefs (Hutson et al., 2018).

Although it is evident that community engagement is needed to design and implement sustainable public health programs to address HIV in Black/African American women, there is an increasing interest among researchers, public health officials, and general medical clinicians on the role spirituality/religiosity have on the HIV epidemic (Szaflarski, 2013). Findings from this study may help to address a gap in the literature on how Black/African American women utilize spirituality/religious practices to influence their attitude, beliefs, self-perception, and self-efficacy of how HIV is acquired.

Hence, the significance of this study involves the examination of the individual views of Black/African American women on how their spiritual/religious practices influence their attitude, beliefs, and self-perception as well as their self-efficacy of how HIV is acquired. These findings may be beneficial to public health practitioners, educators, public health funding agencies, and program developers as they develop interventions to address HIV in Black/African American women as well as bridge the gap in the collaboration efforts between public health and the Black community. Increasing self-efficacy may be an important way in which to promote control and self-regulation regarding sexual practices amongst young African American woman.

Nevertheless, the findings of this study add to the current body of literature on HIV/AIDS but guide the development of the most appropriate HIV prevention interventions for Black/African American women. Furthermore, the social change significance is that the findings of this study may help to shed light on the importance of understanding the need to develop HIV prevention interventions that are not only gender appropriate, but also ethnically and culturally appropriate, keeping in mind that there are

other factors that should be considered when a certain population is being disproportionately affected by a preventable health issue.

Conclusion

The purpose of this chapter was to provide a discussion of the significance of the findings from Chapter 4 as well as their implications. An interpretation of the findings and their alignment with the literature presented in Chapter 2waspresented first. Discussion primarily pertained to reasons why findings were generally not in agreement with the literature, including the fact that the theoretical link between church activities and knowledge of HIV/AIDS acquisition was unclear. Consideration was then given to limitations that were presented in Chapter 1 and the extent to which they influenced the generalizability of these findings. The main limitation was in regard to the sampling, and findings may not be applicable beyond the sample of this particular study. Recommendations were then offered based on the discussion of these limitations and the extent to which these findings generate directions for future research. Implications of these findings for practice, research, and theory were then considered.

Based on the evidence presented in this chapter, it is clear that church activities are significantly related to the ability to self-regulate and control one's behaviors. There does not, however, appear to be a significant relationship between church activities and knowledge of HIV/AIDS acquisition or a mediating relationship involving self-efficacy. These findings do not appear to align with previous research and may be indicative of sampling biases and/or the unique nature of this particular sample. Future research is

needed in order to further explore whether church activities and spirituality influence knowledge of HIV/AIDS, rather than just risk-taking behaviors and self-regulation.

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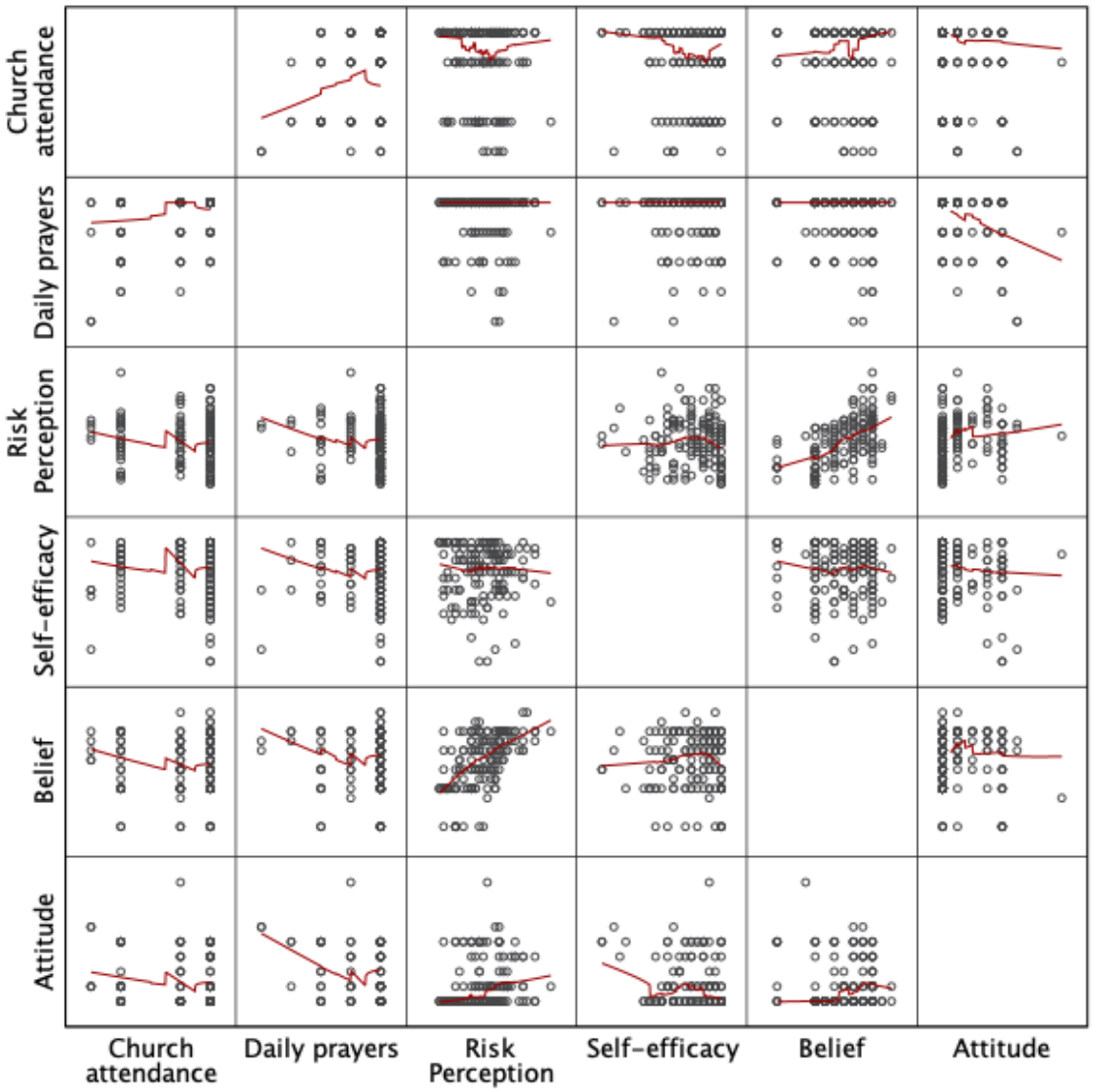
Appendix A: Scatterplot of Dependent and Independent Variables



Appendix B: Centrality of Religiosity Scale

Dimension	Items for both the basic and interreligious versions	Basic CRS versions			Additional Items for the interreligious versions only	Interreligious CRSi versions		
		CRS-5	CRS-10	CRS-15		CRSi-7	CRSi-14	CRSi-20
Intellect	01: How often do you think about religious issues?							
Ideology	02: To what extent do you believe that God or something divine exists?							
Public practice	03: How often do you take part in religious services?							
Private practice	04: How often do you pray?				04b: How often do you meditate?			
Experience	05: How often do you experience situations in which you have the feeling that God or something divine intervenes in your life?				05b: How often do you experience situations in which you have the feeling that you are in one with all?			
Intellect	06: How interested are you in learning more about religious topics?							
Ideology	07: To what extend do you believe in an afterlife—e.g. immortality of the soul, resurrection of the dead or reincarnation?							
Public practice	08: How important is to take part in religious services?							
Private practice	09: How important is personal prayer for you?				09b: How important is meditation for you?			
Experience	10: How often do you experience situations in which you have the feeling that God or something divine wants to communicate or to reveal something to you?				10b: How often do you experience situations in which you have the feeling that you are touched by a divine power?			
Intellect	11: How often do you keep yourself informed about religious questions through radio, television, internet, newspapers, or books?							
Ideology	12: In your opinion, how probable is it that a higher power really exists							
Public practice	13: How important is it for you to be connected to a religious community?							
Private practice	14: How often do you pray spontaneously when inspired by daily situations?				14b: How often do you try to connect to the divine spontaneously when inspired by daily situations?			
Experience	15: How often do you experience situations in which you have the feeling that God or something divine is present?							

Objective frequencies of prayer (personal and obligatory) and meditation	Recoding into five levels
A) Several times a day B) Once a day	5
C) More than once a week	4
D) Once a week E) One or three times a month	3
F) A few times a year G) Less often	2
H) Never	1

Objective frequencies of participation in religious services	Recoding into five levels
A) More than once a week B) Once a week	5
C) One or three times a month	4
D) A few times a year	3
E) Less often	2
F) Never	1

Appendix C: HIV-RP Questionnaire

INSTRUCTIONS: These questions ask about how people think about their risk of getting HIV, the virus that causes AIDS. Please answer the questions honestly. Some of the questions may be like other questions. This is important for our research. Please circle the number that most closely describes your answer. Choose only one answer for each question. **Please think about your sexual experiences in the past 6 months.**

1. **What is your gut feeling about how likely you are to get infected with HIV because of your sexual experiences?**

Extremely likely	Very likely	Somewhat likely	Very unlikely	Extremely unlikely	DK/ Refused
4	4	3	2	1	9

2. **I worry about getting infected with HIV because of my sexual experiences.**

None of the time	Rarely	Some of the time	A moderate amount of time	A lot of the time	All of the time	DK/ Refused
1	2	3	4	4	4	9

3. **Picturing myself getting HIV, because of my sexual experiences, is something I find:**

Very easy to do	Easy to do	Hard to do	Very hard to do	DK/ Refused
4	3	2	1	9

4. **Based on my sexual experiences, I am sure I will NOT get infected with HIV.**

Strongly agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree	DK/ Refused
1	2	3	4	5	6	9

5. **I feel vulnerable to HIV infection because of my sexual experiences.**

Strongly agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree	DK/ Refused
6	5	4	2	2	1	9

6. **There is a chance, no matter how small, I could get HIV because of my sexual experiences.**

Strongly agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree	DK/ Refused
6	5	4	3	3	3	9

7. **Based on my sexual experiences, I think my chances of getting infected with HIV are:**

Zero	Almost zero	Small	Moderate	Large	Very Large	DK/ Refused
1	2	3	4	5	6	9

8. **Getting HIV because of my sexual experiences is something I have.**

Never thought about	Rarely thought about	Thought about some of the time	Thought about often	DK/ Refused
1	2	3	4	9

Sum items to create a total score.

Appendix D: Self-Efficacy Scale for HIV Risk Behaviors – Modified Version

How sure are you that you could….

Sexual items

1. Talk about safe sex with a sexual partner?
2. Refuse to have sex with someone you didn't know very well?
3. Refuse to let a partner have anal sex with you?
4. Get your sex partner to use a condom even when he (or she) didn't feel like using one?
5. Use a condom every time you had sex with your main partner?
6. Use a condom every time you have sex with casual partner?
7. Use a condom every time you have sex with someone you pay (give money or drugs) to have sex?
8. Use a condom correctly if your sex partner wanted you to use one?
9. Buy condoms in a drug store?
10. Put off having sex until you could find a condom?

*Scale scores range from 1 (not at all sure) to 5 (very sure)

Appendix E: TCU HIV/AIDS Risk Assessment Scale

I want to ask about your attitudes and concerns about AIDS and the ways you can become infected.

Tell me how much you agree or disagree with each of these statements.

[USE "ANSWER CARD E"]	DISAGREE STRONGLY	DISAGREE SOMEWHAT	NOT SURE	AGREE SOMEWHAT STRONGLY
a. You believe that you could become exposed to the AIDS virus.	0	1	2	34
b. You think that you really could get AIDS.	0	1	2	34
c. You want to make some changes now that will reduce your AIDS risks.	0	1	2	34
d. You need help in dealing with your drug use.	0	1	2	34
e. You need help to change some of your sex activities.	0	1	2	34
f. You get tired of the problems caused by drugs.	0	1	2	34
g. You are going to change your drug use activities to avoid AIDS.	0	1	2	34
h. You are going to change your sex activities to avoid AIDS.	0	1	2	34
i. You already know what you must do to reduce your AIDS risks.	0	1	2	34
j. You feel sure of yourself in controlling your risky drug use activities.	0	1	2	34
k. You feel sure of yourself in controlling your risky sex activities.	0	1	2	34