Factors Affecting the Likely Use of Pre-Exposure Prophylaxis for Young African American Men Who Have Sex with Men

by

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Lisa Hightow-Weidman

Dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Nursing in the Graduate School of Duke University

2018
ABSTRACT

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Abstract

African American young men who have sex with men (YMSM) are seven and three times more likely than their white and Hispanic counterparts, respectively, to be infected with HIV. Once-daily oral co-formulated tenofovir disoproxil fumarate and emtricitabine [FTC/TDF], for HIV pre-exposure prophylaxis, known as PrEP has been demonstrated to be an effective method of reducing rates of new HIV infections within MSM. Despite this breakthrough in HIV-prevention, African American YMSM use PrEP at a much lower and disproportionate rate in comparison to white MSM. Therefore, the aim of this dissertation was to develop a deeper understanding of the HIV-prevention needs of African American YMSM as it relates to PrEP. This study was conducted using a descriptive qualitative approach, which was guided by a naturalistic design to explore and understand African American YMSM’s cognitive and emotional processes as it relates to PrEP, and how these responses influence their likely future use of PrEP as an HIV-prevention method. The findings revealed important individual-, social-, cultural-, and structural-level factors that affect African American YMSM’s likely future use of PrEP. These findings revealed opportunities for future research and interventions to address the disparate rates of future PrEP use for African American YMSM.
Dedication

I would like to dedicate this dissertation to all the community organizers, activists, researchers, and people living with HIV who came before me and fought to lay the foundation for HIV research today. Your courage, dedication, and persistence allow HIV researchers today to give voice those most impacted by HIV/AIDS. I also want to dedicate this dissertation to Mrs. Betty Hollingsworth, RN, M.Ed. Nearly 21 years ago, “Ms. Betty” set me on a path that opened my eyes and filled my heart with fire, leading me to my journey today. “Ms. Betty,” as she was affectionately known, implemented the first HIV-prevention outreach program at Towson University. Through this program, I and dozens of other students were mentored and trained, learning about the epidemiology of HIV and the associated stigma, and provided many of our first exposure to the community of people living with HIV. Most importantly, she humanized HIV, teaching us not to see “disease,” but the people living with HIV and the impact HIV had on their lives. Her perspective and passion for the field of HIV was contagious, as demonstrated by the number of her former mentees and students still working in the field of HIV. Thank you, Ms. Betty, I love you, for all that you have done and taught me.

I especially want to thank my mother for giving the determination and drive that enabled me to endure and persist through the most difficult of times during this process. You set the bar high. I also thank my love, Adrien, for hanging in there and pushing me, even when he wasn’t sure of what he was pushing me towards. Your patience, kindness, and resilience gave me the courage I needed to keep going when I didn’t have the strength.
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<th>Full Form</th>
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<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
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<tr>
<td>CSM</td>
<td>Common Sense Model of Illness Representation</td>
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<tr>
<td>FDA</td>
<td>United States Food and Drug Administration</td>
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<tr>
<td>MSM</td>
<td>Men who have sex with men</td>
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<tr>
<td>PrEP</td>
<td>Pre-exposure prophylaxis</td>
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<tr>
<td>STI</td>
<td>Sexually transmitted infections</td>
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<td>YMSM</td>
<td>Young men who have sex with men</td>
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</table>
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1. Introduction

1.1 The Problem

African American men who have sex with men (MSM) are particularly vulnerable to health disparities due to the intersection of their racial, sexual, and gender identities. In the US, health disparities in African American MSM are evident in the disproportionate way HIV affects this population. Despite HIV infection rates remaining relatively steady across all racial, ethnic, and age groups since 2011, rates of new HIV infections in African American MSM have increased. Although African American MSM represent a small segment of the population, they account for 66% of new HIV infections in 2016. Of particular concern are young African American MSM, aged 13-24 (YMSM), who represent an increasing proportion of infections among African American MSM (Centers for Disease Control and Prevention, 2015).

High HIV infection rates in young African American MSM are attributable to individual behaviors (e.g., unprotected anal sex, risky sexual behaviors) as well as broader social, cultural, and institutional factors. This chapter includes an overview of the literature highlighting the factors that contribute to the high rates of HIV among African American YMSM, ages 13-24. It will also explore how once-daily oral co-formulated tenofovir disoproxil fumarate and emtricitabine [FTC/TDF] or pre-exposure prophylaxis (PrEP) is an underutilized method of prevention for African American YMSM. Given the inconsistencies in the definition of African American YMSM in the literature, for this chapter, the population will be defined as African American YMSM aged 13-24. Finally, this chapter will give an overview of this dissertation, including the study purpose and aims.
1.2 Disparities in HIV

1.2.1 African Americans, Sex, and HIV

African Americans are disproportionately infected with and affected by HIV, as compared to other racial and ethnic groups (Centers for Disease Control and Prevention, 2017). In 2016, African Americans comprised 44% of people newly diagnosed with HIV in the United States, a rate 7.9 times higher than their white counterparts (Centers for Disease Control and Prevention, 2017). African American males are also infected with HIV at a higher rate than their female counterparts; comprising 70% of new infections among African Americans in 2016 (Centers for Disease Control and Prevention, 2017). However, African American MSM account for the highest rate new HIV infections among African Americans males. African American MSM comprised 79% of new HIV infections in African American males (Centers for Disease Control and Prevention, 2017).

1.2.2 Men Who Have Sex with Men and HIV

According to the CDC, the term “men who have sex with men” (MSM) describes any male who has ever engaged in same-sex sexual behaviors (anal and/or oral sex), regardless of his sexual orientation (Goldbaum, Perdue, & Higgins, 1996; R. M. Young & Meyer, 2005). MSM comprise only 4% of men in the United States; however, they make up a disproportionate number of new HIV infections (Centers for Disease Control and Prevention, 2015). In 2016, the CDC reported that 70% of new HIV infections were from male-to-male sexual contact (Centers for Disease Control and Prevention, 2017). This rate is 44 times greater than that of heterosexual men (Centers for Disease Control and Prevention, 2017).
1.2.3 Young Men Who Have Sex with Men And HIV

1.3 Background

Engaging in same-sex behaviors puts a man at higher risk for HIV. Developmental factors exacerbate this risk due to increased sexual risk-taking during adolescence and young adulthood (Braams, van Leijenhorst, & Crone, 2014). As a result, young men who have sex with men (YMSM) aged 13-24 have the highest incidence and rate of new HIV infection when compared to any other MSM group by age (Centers for Disease Control and Prevention, 2015). In 2016, African American YMSM made up 57% (3,719) of existing HIV infections in YMSM, representing a significant difference in incidence as compared to whites (1,094: 17%), and Hispanics/Latinos (1,687: 26%) (Centers for Disease Control and Prevention, 2017). Therefore, it is imperative to explore the factors that contribute to disparities in HIV rates in African American YMSM and to develop methods to slow or prevent new HIV infections in this population.

1.3.1 Contributing Factors for HIV Risk

To fully understand the HIV disparities for African American YMSM, there must first be an understanding of the factors — individual, cultural, social, and experiences in healthcare — that put them at high risk for HIV (Diefenbach & Leventhal, 1996; Leventhal, Diefenbach, & Leventhal, 1992).

1.3.1.1 Individual factors

1.3.1.1.1 Developmental stage

Adolescence and young adulthood (Arain et al., 2013; Sawyer et al., 2012) are critical periods where interactions with key individuals (i.e., parents, family, friends) (Arain et al., 2013; Sawyer et al., 2012; Smetana, 2011), culture (Giménez-García, Ballester-Arnal, Gil-Llario, Cárdenas-López, & Duran-Baca, 2013; Guilamo-Ramos, Bouris, Jaccard, Lesesne, & Ballan, 2009; Harper, 2007), and society (Berkel et al., 2009; Mahalik et al., 2013) influence a person’s
development, and therefore, their behavioral patterns and health outcomes well into adulthood. Adolescents steadily increase their engagement in risk-taking behaviors, as the brain continues to develop until approximately age 25 (Lebel & Beaulieu, 2011; Reyna & Farley, 2006; Stiles & Jernigan, 2010). Risk behaviors often taper off in early-to mid-adulthood (Mahalik et al., 2013).

Neurocognitive changes cause adolescents to be more sensitive to the rewards versus the risks of a given outcome (Braams et al., 2014; Luna, Padmanabhan, & Geier, 2014). Such changes increase their sensation-seeking (Newcomb, Clerkin, & Mustanski, 2011; Oshri, Tubman, Morgan-Lopez, Saavedra, & Csizmadia, 2013; Stautz & Cooper, 2013), decrease impulse control (Urošević, Collins, Muetzel, Lim, & Luciana, 2012), and increase susceptibility to peer pressure (Albert, Chein, & Steinberg, 2013; Chein, Albert, O'Brien, Uckert, & Steinberg, 2011). As a result, there is an increased likelihood of engaging in high-risk sexual behaviors (e.g., unprotected anal sex) as an adolescent, despite knowing the risks for acquiring HIV (Albert & Steinberg, 2011; Arain et al., 2013; Reyna & Farley, 2006; Rivers, Reyna, & Mills, 2008).

1.3.1.1.2 Sexual behaviors

In addition to their developmental stage, African American YMSM are at increased risk for acquiring HIV because of their earlier sexual debut. On average, African American YMSM sexually debut at age 14.5 years—nearly a year earlier than other African American adolescents (15.26, SD = 1.84) (Biello, Ickovics, Niccolai, Lin, & Kershaw, 2013), and their white MSM counterparts (Outlaw, Phillips, et al., 2011). African American YMSM are also more likely to have an older sexual partner, who is more likely to be infected with HIV (Arrington-Sanders, Leonard, Brooks, Celentano, & Ellen, 2013; Hurt et al., 2010; Millett, Jeffries, et al., 2012; Millett, Peterson, Wolitski, & Stall, 2006; Newcomb & Mustanski, 2012). High HIV community viral load within African American MSM sexual networks, put African American MSM at higher risk for HIV, given they are more likely to date within their race (Clerkin, Newcomb, &
African American YMSM are more likely to meet their sexual partners online, as compared to white YMSM (S. D. Fields et al., 2006; Kubicek, Beyer, Weiss, Iverson, & Kipke, 2010), which increase their chances for an increased number of lifetime sexual partners (Outlaw, Hightow-Weidman, et al., 2011). Thus, the combination of early sexual debut, multiple sexual partners, and high community viral load increases the probability of African American YMSM contracting HIV and other STIs (Millett et al., 2007; Millett, Jeffries, et al., 2012; Millett, Peterson, et al., 2012; Millett et al., 2006; S. D. Fields et al., 2006; Millett, Peterson, et al., 2012; Millett et al., 2006).

While these factors contribute to African American YMSM's risk for HIV, they still do not fully account for the disparate rate of HIV infections for African American YMSM, as compared to white and Latino YMSM. Compared to heterosexuals and white MSM, African American MSM, particularly those aged 18–29, are less likely to know that they are infected with HIV (Dorell et al., 2011; Millett et al., 2011). This is critical as African American MSM who are unaware of their HIV status may unknowingly transmit HIV to their uninfected partners during unprotected anal sex.

Meta-analyses and systematic literature reviews have indicated that the combination of not knowing their own or their sexual partner's HIV serostatus or getting tested during the early stages of HIV infection, inadequate access to care (Feldman, 2010; Millett et al., 2007; Millett et al., 2006; Oster et al., 2011), and delaying initiation of antiretroviral treatment once diagnosed...
with HIV (Millett et al., 2006; Oster et al., 2011), increases the community HIV viral load within the African American YMSM community. This increase in the community viral load increases the odds that an African American YMSM will have a sexual encounter with an HIV-infected person, especially since African American YMSM are more likely to have sex with other African American MSM (Hussen et al., 2013; McKirnan, Du Bois, Alvy, & Jones, 2013; Moore et al., 2013).

1.3.1.1.4 Condom use

In addition to a lack of awareness of their HIV status, HIV infection rates in African American MSM are also driven by barriers to effective condom use. Even though African American YMSM use condoms at a higher rate than their Hispanic and white MSM counterparts, particularly if their sexual partner is African-American (Bruce, Harper, Fernandez, & Jamil, 2012), the rates of new cases of HIV for African American YMSM are still disproportionately high (Ayala, Bingham, Kim, Wheeler, & Millett, 2012; Millett et al., 2007; Millett, Jeffries, et al., 2012; Millett, Peterson, et al., 2012; Oster et al., 2011). However, there is evidence of significant barriers to condom use such as an older partner (Newcomb et al., 2011; Outlaw, Hightow-Weidman, et al., 2011; Outlaw, Phillips, et al., 2011), partner willingness to use condoms (Mustanski, Newcomb, Du Bois, Garcia, & Grov, 2011), age difference between partners (Clerkin et al., 2011; Kubicek, Beyer, et al., 2010), drug or alcohol use (Kubicek, Weiss, Iverson, & Kipke, 2010), and perceived knowledge of partner’s HIV status (Clerkin et al., 2011) decrease rates of condom use and contribute to the high rates of HIV for African American YMSM.

1.3.1.2 Social factors

The lack of relevant sexual health education in schools for MSM (Landovitz, 2007) and the fear of disclosing same-sex sexual desires and/or behaviors to healthcare providers (Maulsby et al., 2014; Mosack, Brouwer, & Petroll, 2013; Santos et al., 2013), perpetuates poor access to
relevant HIV-prevention education and interventions. Additionally, among African American YMSM who have received HIV-prevention messages and/or interventions, some have expressed apathy or a sense of hopelessness regarding their risk for HIV, feeling future HIV infection is inevitable due to the prevalence of HIV in the gay community (Mustanski et al., 2011; Voisin, Bird, Shiu, & Krieger, 2013; Yi, Shidlo, & Sandfort, 2011). This belief, in combination with potentially living in neighborhoods with few health resources or without reasonable access to relevant and culturally-appropriate health services (Boardman & Saint Onge, 2005; Brenner, Zimmerman, Bauermeister, & Caldwell, 2013), put African American YMSM at increased risk for adverse health outcomes.

1.3.1.2.1 Familial and interpersonal factors

Many African American YMSM experience familial rejection because of their same-sex desires (Bruce, Harper, & Interventions, 2011). As a result, African American MSM are more likely to be forced out of their family homes and experience financial difficulties, which forces some to exchange sex, particularly unprotected sex (Ayala et al., 2012), for stable housing or money (Mustanski et al., 2011; S. D. Young et al., 2013). This familial rejection can negatively influence African American YMSM’s willingness to seek medical care, particularly for HIV-prevention education and services (Bruce et al., 2011; Santos et al., 2013). As a result, current HIV-prevention messages (e.g., regarding condom use) are not necessarily reaching African American YMSM at highest risk (Habarta et al., 2017), creating a knowledge gap concerning the methods and importance of protecting themselves from HIV.

1.3.1.2.2 Socioeconomic factors

African-American MSM are also at higher risk of HIV infection due to unjust socioeconomic factors. African American MSM are more likely to live at or below the United States federal poverty line (McKirnan et al., 2013), be under- or uninsured (Berdahl, Friedman,
McCormick, & Simpson, 2013; Millett, Jeffries, et al., 2012), and/or have to travel further for medical care than white MSM (Adams, Kirzinger, & Martinez, 2013). African American MSM experience tremendous racial (Pager & Shepherd, 2008) and sexuality-based discrimination (Bauermeister et al., 2014) serving as barriers towards educational achievement, stable employment, and safe living conditions (Farruggia, 2006; Millett, Jeffries, et al., 2012; Nebbitt, 2009; A. W. Young et al., 2007). As a result, African American YMSM are also more likely to experience homelessness, not attend college, and be unemployed (Buttram & Kurtz, 2015).

These financial and educational constraints serve as barriers to African American MSM effectively navigating the healthcare system (Blaxter, 2010; Ronson & Rootman, 2009; Solar & Irwin, 2007), accessing timely preventative health services (Hussen et al., 2013; McKirnan et al., 2013; Moore et al., 2013), and understanding pertinent health information (Grzywacz et al., 2012; Winterich et al., 2009), which increases the time to diagnosis and treatment for illnesses such as HIV.

1.3.1.3 Experiences in healthcare

African American YMSM may be less willing to engage with health professionals until they have a critical health concern, due to cultural beliefs regarding healthcare. In the African American community, developing a masculine identity often involves incorporating fewer messages about health and self-care (E. L. Fields et al., 2012; Hammond, Matthews, Mohottige, Agyemang, & Corbie-Smith, 2010), but more messages about risk-taking (Kalmuss & Austrian, 2010). Similar to middle and older aged African American men, African American YMSM rarely discuss their health concerns with anyone (Carter, Tippett, Anderson, & Tameru, 2010) and self-treat suspected illness and seek professional medical advice/treatment in the advanced stages of illness (George, 2012; Hammond et al., 2010).

Given there are several factors that contribute to the disparate rates of HIV for African American YMSM, it is paramount that prevention methods are developed that can overcome
these factors to decrease rates of HIV infection among African American YMSM. Therefore, to develop new, relevant, and sustainable HIV interventions, particularly for African-American YMSM, it is crucial to engage them in research, before negative health patterns are established, putting them at higher risk for HIV. However, when developing these HIV interventions, it is critical to understand the factors that can influence African American YMSM's use of these methods.

1.4 HIV Pre-Exposure Prophylaxis

Once-daily oral co-formulated tenofovir disoproxil fumarate and emtricitabine [FTC/TDF], for HIV pre-exposure prophylaxis, commonly known as PrEP, has been demonstrated to reduce HIV infections in African American YMSM (Buchbinder & Liu, 2011; Garcia-Lerma, Paxton, Kilmarx, & Heneine, 2010; Grant et al., 2010). PrEP was approved by the Food and Drug Administration (FDA) in (2012) to be used as an HIV-prevention method for populations at high risk for HIV (e.g., MSM). In (2014), the CDC published the most recent PrEP guidance that covered all populations at high risk for HIV and details about the clinical management of patients on PrEP. PrEP is a once-daily pill for the prevention of an infection with HIV (Grant et al., 2010) and can be used in conjunction with condoms (Kelesidis & Landovitz, 2011). PrEP can reduce HIV infection between male partners by up to 90% with daily dosing (Grant et al., 2010) and by 86% (95% CI: 40-99, p = 0.002) with intermittent, or “on-demand” use (Molina et al., 2015). On-demand dosing consisted of two PrEP pills prior to sex (2-24 hours), a third pill 24 hours after the sexual encounter, and the last and fourth pill 24 hours later (Molina et al., 2015). The continued proven efficacy of PrEP to decrease rates of HIV infection in the MSM population with intermittent use shows great promise for reducing new cases of HIV for African American YMSM (Volk et al., 2015).
1.4.1 African American MSM and Pre-Exposure Prophylaxis

Despite this breakthrough in HIV-prevention and the CDC’s guidelines for PrEP use (2014), there is a low rate of uptake of PrEP among MSM (H. L. King et al., 2014). Between 2012 to 2015, nearly 80,000 people in the United States were prescribed PrEP, with men accounting for 74.6% of PrEP prescriptions (Mera, McCallister, Palmer, Mayer, Magnuson, & Rawlings, 2016). However, in comparison to whites, African-Americans utilized PrEP at a much lower rate. In 2015, whites made up 74% of those using PrEP, while African-Americans accounted for only 10% of PrEP users (Bush et al., 2016).

Preliminary evidence shows that African American MSM, of all ages, are less likely than white MSM to obtain a PrEP prescription from a healthcare provider (Cohen et al., 2015; Eaton, Driffin, Bauermeister, Smith, & Conway-Washington, 2015). Eaton, Herrick, et al. (2015) found that only 22% of 436 self-identified African-American MSM had ever heard of PrEP, with only eight of them having ever used PrEP. There is also evidence that indicates African American MSM’s lack knowledge about PrEP as a HIV-prevention method (Eaton, Driffin, et al., 2015; Krakower & Mayer, 2012; Perez-Figueroa, Kapadia, Barton, Eddy, & Halkitis, 2015; Sineath et al., 2013), costs (Keller & Smith, 2011; Mustanski, Johnson, Garofalo, Ryan, & Birkett, 2013; Perez-Figueroa et al., 2015), and side effects of PrEP (H. L. King et al., 2014) influence low levels of PrEP uptake in this population. In addition, low health literacy (Miller, Abrams, Earles, Phillips, & McCleary, 2011) and a mistrust of healthcare providers (Edwards, Davies, & Edwards, 2009; Martin, Rief, Klaiber, & Braschler, 2006) further contribute to a lack of PrEP use. Studies also indicate that a lack of perceived risk for HIV infection (Perez-Figueroa et al., 2015), poor experiences with HIV testing, and increased sexual risk-taking (e.g., condomless sex) (Eaton, Driffin, et al., 2015) play a role in whether or not African American YMSM decide to use PrEP.
1.4.2 African American’s Distrust of the Medical System

The disparity for PrEP use in African American MSM may have roots in the history of African Americans’ interactions with the healthcare system. Due to experiences with racism and discrimination (Moore et al., 2013), and the collective memory of the African American community regarding past clinical trials (e.g., Tuskegee syphilis study) (Brooks et al., 2017; Cahill et al., 2017), African Americans have a distrust of medical providers and the healthcare system (McKirnan et al., 2013; Moore et al., 2013). As a result, interactions with the healthcare system can make race more salient (Sellers, Smith, Shelton, Rowley, & Chavous, 1998) and influence how African Americans perceive new discoveries about diseases or “medical breakthroughs” to improve health. In one study, 31% of African Americans surveyed believed that HIV was a form of genocide and/or a way for the government to control the African American population (Bogart, Wagner, Galvan, & Banks, 2010). In this same study, 33% of African Americans believed a cure for AIDS was being withheld from the poor and/or antiretroviral medicine used to treat HIV is poisonous (17%).

Studies have documented that African Americans often have worse access to general healthcare and receive poorer quality of care than whites, both of which continue to contribute to the widening health disparities between African Americans and their white counterparts (Agency for Healthcare Research and Quality, 2014). African Americans are more likely to receive delayed screening, care, and treatment (Agency for Healthcare Research and Quality, 2014; Kowalkowski, Hart, Du, Baraniuk, & Latini, 2012), receive care from poorly trained providers (M. Levy et al., 2014), and are less likely to be referred for preventative screenings or specialty care (Williams & Jackson, 2005), as compared to whites.

Distrust in the healthcare system, coupled with negative experiences in the healthcare setting, particularly for medicines used for HIV-prevention and treatment, contribute to African Americans being more likely to forgo preventative screening, delay medical care (Carpenter et
al., 2009; Plowden & Miller, 2000), and be less open to health recommendations from medical providers (R. Palmer, Chhabra, & McKinney, 2011). While these are very real and potential barriers to the use of PrEP in African American MSM, they likely do not fully explain the racial disparity for low PrEP use within this group.

1.4.3 Healthcare Providers and Pre-Exposure Prophylaxis

Healthcare providers can also influence African American YMSM’s uptake of PrEP. Research has indicated that African American YMSM (Behel et al., 2008) clinicians (Mullins, Lally, Zimet, & Kahn, 2015) consider the primary care provider as the best person to educate their patients about and prescribe PrEP. The current CDC (2014) guidelines state providers should screen their patients — particularly those from populations and communities at high-risk risk for HIV — for eligibility for PrEP at every clinical visit. Yet, studies have found that a provider’s level of knowledge of current PrEP guidelines and how to prescribe PrEP (Puro, Palummieri, De Carli, Piselli, & Ippolito, 2013; R. M. White, 2005), and their knowledge of gay men’s sexual health issues, can pose barriers to African American YMSM accessing PrEP (Krakower, Biello, & Mayer, 2014). Also, many primary care providers do not ask their patients about their sexual orientation or behaviors or assess their sexual risk factors for HIV (East & El Rayess, 1998; Kitts, 2010). Many YMSM, particularly African American YMSM, are not routinely offered an HIV test by their clinicians (Dorell et al., 2011; Mimiaga et al., 2009), which is an essential first step for prescribing PrEP (U.S. Pubic Health Service, 2014). This gap in care may be related to primary care clinicians’ negative attitudes and beliefs pertaining to same-sex behaviors (Chapman, Wardrop, et al., 2012; Sirotta, 2013) and/or a lack of knowledge of sexual health issues specific to African American MSM (M. Levy et al., 2014; Malebranche, Peterson, Fullilove, & Stackhouse, 2004).
In addition to issues with communication between African American YMSM and their providers, clinicians are inconsistent in their beliefs and prescribing practices concerning which patients should be prescribed PrEP (E. Arnold et al., 2012). Clinicians also vary in their understanding of and willingness to prescribe PrEP (Knight, Shoveller, Carson, & Contreras-Whitney, 2014; Mimiaga, White, Krakower, Biello, & Mayer, 2014; Mullins et al., 2015; Tang et al., 2014). Studies conducted after the CDC’s Interim PrEP Guidelines (2012) were published found that many clinicians had varying criteria for who was considered a patient at high-risk for HIV, which patient populations would be the most adherent and less likely to increase risky sexual behaviors (e.g., condomless anal sex), and therefore benefit the most from PrEP (E. Arnold et al., 2012; Mullins et al., 2015; Wilson & Moore, 2009). Although many of these inconsistencies can be attributed to providers’ uncertainties of how to implement the interim guidelines (Mullins et al., 2015), it does not fully explain the low awareness and under-utilization of PrEP for African American YMSM.

Healthcare providers, namely primary care providers (physicians and nurse practitioners and physician assistants), are the gatekeepers to their patients’ access to PrEP. Clinicians who exhibit racial bias when considering prescribing PrEP for patients who are African American MSM can serve as another barrier to accessing PrEP (Calabrese et al., 2017). Individual characteristics of the prescribing clinicians such as gender, race, number of years in practice, and type of clinical experiences often influence discriminatory beliefs and practice. Calabrese, Earnshaw, Underhill, Hansen, and Dovidio (2014) found that medical students were more likely to believe that African American MSM were more likely to continue to engage in risky sexual activities when on PrEP. While this study was conducted with medical students, and specifically with PrEP, there have been similar studies over the years with licensed clinicians that suggest that African American YMSM experience racial discrimination (Irvin et al., 2014; Malebranche et al., 2004), in the healthcare setting (Malebranche et al., 2004). These studies provide evidence of
specific incidences in which HIV-infected African-American patients received antiretroviral treatment later than their HIV-infected white counterparts (Gebo et al., 2005; W. D. King, Wong, Shapiro, Landon, & Cunningham, 2004), particularly if their healthcare providers were white (W. D. King et al., 2004).

Thus, individual, cultural, social, and experiences in healthcare play a significant role in African American YMSM’s risk for HIV. These factors influence African American YMSM’s knowledge about PrEP, whether PrEP is prescribed to them, and whether they use it once prescribed. One gap in the literature is the lack of understanding of African American YMSM's emotional and cognitive processes concerning PrEP, and how these processes influence their likely use of PrEP as a risk-reduction strategy. Therefore, it is essential to understand how these factors and processes serve as barriers and facilitators for African American YMSM’s likely use of PrEP as an HIV risk-reduction strategy.

1.5 Approach

This dissertation was a descriptive qualitative study, which was supplemented with descriptive quantitative information. Quantitative data from a descriptive survey was used to capture individual characteristics and key factors that influenced African American YMSM’s use of PrEP. This study explored factors that would influence African American YMSM’s likely use of PrEP. In-depth qualitative interviews were conducted with 25 African American YMSM and to collect data concerning factors that served as facilitators or barriers to them using PrEP.

1.6 Purpose Statement and Aims

The overall purpose of this dissertation was to develop a deeper understanding of the HIV-prevention needs of African American YMSM as it relates to PrEP. Aim 1 was to identify and understand African American YMSM’s cognitive and emotional processes in response to their likely use of PrEP as a method to reduce their risk for HIV. The research question for Aim 1
was: How do these cognitive and emotional processes influence African American YMSM’s likely use of PrEP as an HIV-prevention method? Aim 2 was to identify what factors (sociocultural, individual, experiences in healthcare, socioeconomic) influence African American YMSM’s likely use of PrEP as a coping strategy for HIV-prevention. The research question for Aim 2 was: How do these factors (social, cultural, individual, experiences in healthcare, socioeconomic) serve as barriers and facilitators for African American YMSM’s likely use of PrEP as an HIV-prevention method?

This study also examined the usefulness of the adapted Common Sense Model of Illness Representation (Diefenbach & Leventhal, 1996) as a conceptual framework to understand how African American YMSM’s emotional and cognitive processes, as well as other influences, affected the likely use of PrEP as an HIV-prevention strategy. This dissertation achieved the study aims and answered the research questions. The focus of each of the five chapters follows.

**1.6.1 Chapter 1 - Overview**

This chapter introduced the problem and the significance of HIV in the United States, particularly for African American YMSM aged 13-24. It also discussed the state of using Pre-Exposure Prophylaxis as a method of HIV-prevention to reduce rates of HIV in African American YMSM. The evidence provides the context for the dissertation study and evidence of the need for PrEP as an HIV-prevention method for African American YMSM.

**1.6.2 Chapter 2 - Patient and Provider Factors of Prep Use Among African American MSM: What We Do and Don’t Know**

The Adapted Common Sense Model for Illness Representation (CSM) was introduced and used as the organizing framework for an integrative review that explore the factors that impact African American MSM’s likely use of PrEP as an HIV-prevention strategy. An integrative literature review of the literature was conducted to explore what factors served as
facilitator and/or barriers to African-American MSM’s uptake of PrEP. Specifically, the aim of this review was to: 1) examine the potential barriers to and facilitators of African-American MSM’s use of PrEP and 2) capture African American MSM’s thoughts on PrEP as a method of HIV-prevention. This chapter examines the emotional and cognitive responses to the threat of HIV from the perspectives of both African American MSM and their healthcare providers. It examined how individual, cultural, social factors, and experiences in healthcare affect African American MSM and their healthcare providers’ perceptions of PrEP and the uptake of PrEP. Also discussed are the implications, usefulness, and limitations of the CSM to examine PrEP uptake for African American MSM.

1.6.3 Chapter 3 - “That Guy is Gay and Black. That’s a Red Flag.”: How HIV Stigma and Racism Affect Perception of Risk Among African American MSM

In Chapter Three, data from the qualitative study and the descriptive survey were respectively analyzed to explore aims 1 and 2. The results explored how stigmatizing and discriminatory interactions in society shaped African American YMSM’s emotional and cognitive illness representations for HIV, influencing their willingness to use PrEP as a coping strategy to reduce their risk for HIV. This chapter presents data that 1) explored and analyzed how experiences with HIV stigma and racism shaped HIV perception of risk for African American MSM, and 2) discussed how HIV perception of risk and internalized HIV stigma affected the likelihood of future PrEP use for African American YMSM.

1.6.4 Chapter 4 - Young African American Men Who Have Sex with Men and Their Perceptions of the Healthcare System

This chapter presents qualitative and quantitative data regarding African-American MSM’s experiences in the healthcare setting and how these experiences influence their willingness to use PrEP as a coping strategy for HIV. The aims of this chapter were to 1) examine
and analyze young African American MSM’s experiences seeking HIV-prevention and sexual health services in the healthcare system, and 2) explore how young African American MSM’s experiences in the healthcare system influenced their likelihood to use PrEP. Implications for changes within the healthcare system needed to reduce the risk of HIV and to increase the likelihood of the use of PrEP are identified.

1.6.5 Chapter 5 - Conclusion

This chapter synthesized the results of the overall study and critiqued the usefulness of the adapted Common Sense Model for understanding the barriers and facilitators that affect African American YMSM’s use of PrEP as an HIV risk-reduction strategy. Implications for future research, policy, and healthcare practices were also identified.
2. Patient and Provider Factors Affecting Pre-Exposure Prophylaxis Use Among African-American Men Who Have Sex With Men: What We Do and Don’t Know

2.1 Overview

The ability of Pre-Exposure Prophylaxis (PrEP) to decrease high rates of new cases of HIV for African-American men who have sex with men (MSM) offers great promise. However, uptake of PrEP by this population has been slow. African-Americans experience 44% of new HIV infections in contrast to whites who account for 26% of new HIV infections (Centers for Disease Control and Prevention, 2017). Yet 74% of PrEP prescriptions are used by whites, while African-Americans use only 10% of PrEP prescriptions (Bush et al., 2016). In addition, healthcare providers, namely primary care providers are the gatekeepers to PrEP, providing screening, education to patients at high risk for HIV (Beymer et al., 2017). This integrative literature review examines the current research on both the patient and provider factors contributing to the disparate number of PrEP African American MSM in the United States. This review is guided by an Adapted Common Sense Model of Illness Representation for HIV risk reduction in African-American MSM, which was based on The Common Sense Model of Illness Representation (Leventhal, Brissette, & Leventhal, 2003), and includes patient and provider components essential to the understanding of barriers to and facilitators of HIV-prevention.

2.2 Introduction

In 2010, Grant et al. (2010) published the results of the Preexposure Prophylaxis Initiative study (iPrEx), which documented the efficacy of using once-daily oral co-formulated tenofovir disoproxil fumarate and emtricitabine [FTC/TDF] for HIV PrEP in MSM. Grant’s (2010) study demonstrated that [FTC/TDF], also known as PrEP, could reduce HIV transmission between male sex partners by up to 44% when used daily. Then, in 2015, two milestones occurred that facilitated upscaling PrEP in the community. First, a San Francisco demonstration
project observed no new HIV infections over three years in clients who initiated and adhered to
daily PrEP (Volk et al., 2015), and the landmark IPERGAY study demonstrated a reduction of
HIV transmission by 86% with even “on-demand” use of PrEP (Molina et al., 2015). On-demand
dosing consisted of two PrEP pills prior to sex (2-24 hours), a third pill 24 hours after the sexual
encounter, and the last and fourth pill 24 hours later (Molina et al., 2015). These pivotal studies
provided evidence for the efficacy of PrEP both daily and with “on-demand” use and
demonstrated the ability of a clinical setting to roll out PrEP on a large scale among MSM (Volk
et al., 2015). Table 1 provides a timeline for the sequence of some of the key studies and
regulatory actions of importance to the adoption of PrEP among MSM, particularly in the US.
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>iPrEx Study Results for Men Who Have Sex With Men</td>
</tr>
<tr>
<td>2011</td>
<td>Gilead requests FDA approval of [FTC/TDF] for HIV Pre-Exposure Prophylaxis</td>
</tr>
<tr>
<td>2011</td>
<td>CDC Interim Guidance: Preexposure Prophylaxis for the Prevention of HIV Infection in Men Who Have Sex with Men</td>
</tr>
<tr>
<td>2012</td>
<td>FDA approves [FTC/TDF]PrEP for Men Who Have Sex with Men</td>
</tr>
<tr>
<td>2015</td>
<td>Published results from San Francisco Demonstration Project</td>
</tr>
<tr>
<td>2015</td>
<td>Published results from the IPERGAY study</td>
</tr>
</tbody>
</table>
PrEP’ ability to decrease rates of HIV transmission demonstrates is a step forward in reducing new cases of HIV among MSM. According to the CDC, in 2016, African Americans account for the highest number of new HIV diagnoses among all gay and bisexual men (10,315; 39%), followed by whites (7,570; 29%) and Hispanics/Latinos (7,013; 27%) (Centers for Disease Control and Prevention, 2017). Furthermore, in 2015, young African-American MSM aged 13-24 accounted for 38% of new HIV infections among African-American MSM (Centers for Disease Control and Prevention, 2015). Despite this, the uptake of PrEP by African-American MSM has been slow (Eaton, Driffin, et al., 2015). From 2012 through 2015, nearly 80,000 people in the United States had been prescribed PrEP, with men accounting for 74.6% of PrEP prescriptions (Mera McCallister et al., 2016). However, in 2015 African-Americans made up 44% of new HIV infections but only 10% of the population using PrEP, compared to whites who comprised 27% of new HIV infections and over 74% of PrEP users (Bush et al., 2016). Given these numbers, it is imperative to understand the underlying reasons and contributing factors for the lower rate of PrEP use among African-American MSM — a group that has the highest rates of HIV.

Healthcare providers play a pivotal role in facilitating access to PrEP for their patients. The current CDC (2014) guidelines state that primary care providers should screen their patients — particularly those from populations and communities at high-risk for HIV — for eligibility for PrEP at every clinical visit. The primary care provider presumably is familiar with their patient’s medical history and comorbidities and provides their patients with the necessary education and referrals for optimal health (Nunn et al., 2017; Underhill, Operario, Skeer, Mimiaga, & Mayer, 2010). However, healthcare providers have expressed varying concerns about their ability to meet the HIV-prevention needs of their patients using the PrEP guidelines (Beymer et al., 2017; Scholl, 2016). Therefore, it is critical to understand the factors that affect healthcare providers’ ability to provide PrEP to populations most at risk for HIV.
2.3 Theoretical Framework

The adapted Common-Sense Model of Illness Representation was developed based on The Common-Sense Model of Illness Representation (Leventhal et al., 2003; Leventhal, Meyer, & Nerenz, 1980) for use as the guiding theoretical framework for this integrative review. The original Common Sense Model of Illness Representation (CSM) was developed by Leventhal et al. (1980) to explain how parallel processes — emotive and cognitive — simultaneously shape a person’s understanding of illness. The model posits that the person is central in the model, playing an active role in the process as a problem-solver, actively seeking information to inform their “common sense” approach to understanding their current health status (Diefenbach & Leventhal, 1996). This “illness representation” is influenced by the person’s individual characteristics, cultural and social factors, and past experiences with healthcare (Diefenbach & Leventhal, 1996; Leventhal et al., 1980; Leventhal, Zimmerman, & Gutmann, 1984). This illness representation helps to determine the coping strategies a patient employs when faced with an actual or potential health threat (Diefenbach & Leventhal, 1996; Leventhal et al., 1980; Leventhal et al., 1984). This is a continuous process, with the patient appraising of the coping strategy, reinforcing or discrediting their original illness representation (Diefenbach & Leventhal, 1996).

The adapted Common-Sense Model of Illness Representation (Figure 1) shows the same pathway (stimulus → illness representation → coping → appraisal) described in the original model, but places both the patient and healthcare provider at the center of the model. Each plays an active role in the process as a problem-solver, actively seeking and sharing information to form a joint or shared “illness representation.” Similar to the original model, the patient’s and the healthcare provider’s individual illness representations of the health threat (HIV) are based on their individual emotional (fear, anger, depression, etc.) (Baumeister, Vohs, DeWall, & Zhang, 2007; Leventhal et al., 1980) and cognitive (naming the health threat, assessing the cause, timeline, consequences, and controllability of the threat) responses to the threat of HIV.
(Diefenbach & Leventhal, 1996). Ideally, this process would lead to a shared illness representation (high behavioral risk for HIV) between the patient and health provider, an agreed-upon coping strategy (referral to use PrEP) at the end of a clinical visit, and a planned appraisal of the strategy (scheduled future clinic visit) (Baumeister et al., 2007; Leventhal et al., 1980; Leventhal et al., 1984).

For this integrative review, each of these factors will be explored among both patients and providers to understand how they influence African-American MSM’s perceptions and uptake of PrEP as a method of HIV-prevention. Understanding how these patient- and provider-related factors influence this population’s uptake of PrEP can help to aid clinicians and HIV-prevention programs in promoting PrEP for African-American MSM.
Adapted Common Sense Model adapted from Leventhal, Meyer, and Nerenz (1980).

Figure 1. Adapted Common Sense Model of Illness Representation Applies to HIV Risk
2.4 Methods

The methods for this review were guided by the methodological framework for integrative reviews by Whittemore and Knafli (2005). Their framework includes identification of the problem, the literature search, data evaluation, data analysis, and presentation of the results, and allows for the integration of qualitative, quantitative, and mixed methods research studies in one review. Their framework provides a useful framework to evaluate and analyze the data from the PrEP literature.

2.4.1 Problem Identification

Guided by the adapted Common-Sense Model of Illness Representation, the purpose of this review is to understand the patient- and provider-related factors contributing to the lower number of PrEP use among African-American MSM in the United States. Studies including providers and African American MSM patients are included in this review. By including study findings on both patients and providers, this review will comprehensively identify the barriers and facilitators of PrEP uptake and use, and may offer insight into future strategies that can increase use of PrEP for HIV-prevention among African-American MSM.

2.4.2 Literature Search

The literature search strategy was developed in collaboration with a librarian experienced in health science research. Five major databases—PubMed, CINAHL, PsycINFO, Scopus, and ProQuest—were systematically searched using a step-wise method. The search strategy involved a two-part process. First, articles were captured to focus on factors among healthcare providers and MSM patient populations, more broadly. The first search consisted of five main categories: 1) descriptors of men (male or men), 2) same-sex behaviors (homosexual, bisexuality), 3) HIV or AIDS (HIV infections), 4) pre-exposure prophylaxis, and 5) delivery of healthcare (anti-HIV agents/supply and distribution) and other potential contributors to PrEP use among patients and
providers (attitude to health, adherence, socioeconomic factors, non-adherence, and prejudice and biases). (See Appendix A for a complete list of search terms.) Second, a search was conducted following similar categories to those in the first, but focused solely on African-American MSM (see Appendix B for complete list of search terms).

Each search was refined to include medical subject heading terms (MeSH) and a focused search of the title and abstracts (tiab). The integrative review was focused on original data; therefore, the search eliminated editorials, letters to the editor, case reports, and commentaries. Studies were also limited to “Humans” and “English language.” The search was conducted in October 2017 and initially yielded a total of 651 articles published from 1993-2017. Only articles published after the release iPrEx in 2010 were included in the review since the study results and following press releases and announcements would have helped to raise awareness about PrEP. Eliminating articles published prior to 2010 (n = 17) and duplicates (n = 90), a total of 544 articles remained (Table 2). The articles were screened to exclude articles that did not focus on pre-exposure prophylaxis; knowledge of, accessing, or utilizing preventative HIV services (HIV testing and PrEP); or if the study was conducted outside of the United States.
Table 2. Identification and Screening Process

<table>
<thead>
<tr>
<th>Process</th>
<th>Count (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Records ID through databases</td>
<td>651</td>
</tr>
<tr>
<td>Articles prior to 2010 removed</td>
<td>17</td>
</tr>
<tr>
<td>Duplicates removed</td>
<td>90</td>
</tr>
<tr>
<td>Records screened by title and abstract</td>
<td>544</td>
</tr>
<tr>
<td>Articles excluded based on inclusion criteria</td>
<td>384</td>
</tr>
<tr>
<td>Outside the U.S.</td>
<td>155</td>
</tr>
<tr>
<td>Non-African American MSM</td>
<td>27</td>
</tr>
<tr>
<td>Non-HIV-prevention with Oral PrEP</td>
<td>175</td>
</tr>
<tr>
<td>Systematic reviews</td>
<td>27</td>
</tr>
<tr>
<td>Full-text articles assessed for eligibility</td>
<td>160</td>
</tr>
<tr>
<td>Full-text articles excluded</td>
<td>118</td>
</tr>
<tr>
<td>Reasons excluded:</td>
<td></td>
</tr>
<tr>
<td>Outside the U.S.</td>
<td>8</td>
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<tr>
<td>Non-African American MSM</td>
<td>13</td>
</tr>
<tr>
<td>Non-HIV-prevention with Oral PrEP</td>
<td>25</td>
</tr>
<tr>
<td>Systematic reviews</td>
<td>1</td>
</tr>
<tr>
<td>Conference Abstract</td>
<td>5</td>
</tr>
<tr>
<td>Did Not Specify African American MSM in Analysis</td>
<td>66</td>
</tr>
<tr>
<td>Studies included in the synthesis</td>
<td>42</td>
</tr>
</tbody>
</table>
2.4.3 Data Evaluation

The first stage of the analysis was data reduction. Data reduction requires determining how to organize, abstract, and code the data from the articles into a predetermined framework (Whittemore & Knafl, 2005). The statistically significant data from the quantitative studies and the themes from the qualitative studies were abstracted into a table, based on the concepts of the Adapted Common-Sense Model of Illness Representation — emotional and cognitive representation; stimulus; individual characteristics; experiences in healthcare; social; and cultural factors (Diefenbach & Leventhal, 1996). The data were displayed to facilitate comparisons and the identification of patterns across results (Whittemore & Knafl, 2005). This method also allowed for the identification of new categories to emerge from the findings.

2.4.4 Data Abstraction and Analysis

The following criteria was used to determine which articles were included in the analysis:

1) primary source data from a peer-reviewed study; 2) reported separate results for African American MSM in racially diverse studies; 3) reported separate results for healthcare providers (physicians, nurse practitioners, and physician assistants) and PrEP utilization; and 4) reported results pertaining to oral PrEP for HIV-prevention.

Following the concepts of the adapted model of the Common Sense Model of Illness Representation (Diefenbach & Leventhal, 1996), the studies that reported African American MSM were categorized based on the concepts of the model: stimulus, emotional illness representation, cognitive representation, experiences in healthcare, cultural factors, social factors, and PrEP as a coping strategy. Similarly, studies that reported healthcare providers were placed in the following categories: stimulus, emotional illness representation, cognitive representation, individual characteristics, experiences in healthcare, and PrEP as a coping strategy. The final stage of the analysis was completed when conclusions were drawn and interpretations made from...
the analysis (Whittemore & Knafl, 2005). The results of the analysis are organized based on the conceptual model. First, the factors affecting PrEP uptake in African American MSM accessing HIV-prevention services are described. Next, healthcare providers' experiences caring for MSM in the clinical setting are described.

2.5 Results

2.5.1 Overview of Findings

A total of 42 articles were included in the analysis. The 42 studies in the review employed a number research methodologies. Three used mixed methods (Brooks et al., 2017; Mullins, Lally, Zimet, & Kahn, 2015), 26 used a cross-sectional design (Arrington-Sanders et al., 2016; Bauermeister, Meaney, Pingel, Soler, & Harper, 2013; Brooks et al., 2017; Calabrese et al., 2017; Calabrese, Earnshaw, Underhill, Hansen, & Dovidio, 2014; Crosby, Geter, DiClemente, & Salazar, 2014; L. Eaton et al., 2015; Eaton et al., 2014b; Fallon, Park, Ogbue, Flynn, & German, 2017; Gamarel & Golub, 2015; Golub, Kowalczyk, Weinberger, & Parsons, 2010; Grov, Whitfield, Rendina, Ventuneac, & Parsons, 2015; Hoots, Finlayson, Nerlander, & Paz-Bailey, 2016; Khanna et al., 2016; King et al., 2014; Lelutiu-Weinberger & Golub, 2016; Logo, 2016; Maksut, Eaton, Siembida, Fabius, & Bradley, 2017; Mantell et al., 2014; Ojikutu et al., 2018; J. Raifman et al., 2017; Rolle, Rosenberg, Luisi, et al., 2017; Tellalian, Maznavi, Bredeek, & Hardy, 2013; Young et al., 2017), 9 used qualitative descriptive (Arnold et al., 2012; T. Arnold et al., 2017; Ronald A Brooks et al., 2011; Cahill et al., 2017; Calabrese et al., 2016; Doblecki-Lewis & Jones, 2016; Galindo et al., 2012; R. Perez-Figueroa, Halkitis, & Kapadia, 2013), two used a pretest/posttest design (Chan et al., 2016; Clement et al., 2017), three were longitudinal (Cohen et al., 2015; Khanna, Schumm, & Schneider, 2017; Smith, Mendoza, Stryker, & Rose, 2016), one an intervention (J. Raifman et al., 2017); and one observational cohort study (Rolle, Rosenberg, Siegler, et al., 2017). In 32 of the articles, the study population was MSM and in the
other 10 the samples were healthcare providers and administrators. In the studies in which the study sample was MSM, 21 had a mixed demographic, with African American MSM ranging from 6% to 75% of the sample. Findings are organized below based on the adapted Common Sense Model of Illness Representation with factors specific to African American MSM presented first and factors specific to providers presented second.

2.5.2 African American MSM and PrEP

2.5.2.1 Stimulus: Awareness of PrEP

For African American MSM to consider PrEP as a method for HIV-prevention, they must first be aware of PrEP’s existence and its purpose. In studies that measured participants’ awareness of PrEP, greater than half the sample of African American MSM were not aware of PrEP (Arrington-Sanders et al., 2016; Bauermeister, Meanley, Pingel, Soler, & Harper, 2013; Brooks et al., 2017; Eaton, Driffin, et al., 2015; Eaton et al., 2014; Eaton, Herrick, et al., 2015; Fallon, Park, Ogbue, Flynn, & German, 2017; Khanna et al., 2016; Maksut, Eaton, Siembida, Fabius, & Bradley, 2017; Mantell et al., 2014; Ojikutu et al., 2018; Raifman, Flynn, & German, 2017; Raifman, Nunn, et al., 2017; Rolle, Rosenberg, Luisi, et al., 2017; Rolle, Rosenberg, Siegler, et al., 2017). African American MSM were less likely to be aware of PrEP in comparison than white MSM (Fallon et al., 2017; Raifman, Flynn, et al., 2017). Three studies reported that some African American MSM in their sample had never heard the terms “PrEP” or “pre-exposure prophylaxis,” (Cahill et al., 2017; Fallon et al., 2017; Maksut et al., 2017) when referring to this method of HIV-prevention.

There were several factors associated with awareness of PrEP for African American MSM. African American MSM who were older (Arrington-Sanders et al., 2016; Bauermeister et al., 2013; Eaton et al., 2014), reported a higher number of lifetime sexual partners (Arrington-Sanders et al., 2016), engaged in recent sexual activity (Arrington-Sanders et al., 2016), had
higher educational attainment (Bauermeister et al., 2013; Eaton et al., 2014; Fallon et al., 2017), had a higher annual income ($\geq$20,000) (Eaton et al., 2014; Fallon et al., 2017), identified openly as same-gender loving/gay (Eaton et al., 2014), disclosed their sexual orientation to a healthcare provider (Arrington-Sanders et al., 2016), had a past sexually transmitted infection (STI) (Bauermeister et al., 2013), had insurance (Bauermeister et al., 2013), or were part of a house/family network (Methy, Meyer, Bajos, & Velter, 2017) were more likely to be aware of PrEP. Perez-Figueroa et al. (2015) reported that participants learned about PrEP through friends, social media, TV, and the news. Khanna, Schumm, and Schneider (2017) reported that African American MSM in their study had friends in their social media (Facebook) networks who were either aware of PrEP or were using PrEP. African American MSM who become aware of PrEP over time were more likely to have a network of friends who are connected to resources (e.g., primary care) that increase their awareness of PrEP (Khanna et al., 2017). Conversely, Maksut et al. (2017) reported that older age was associated with being unaware of PrEP. Perceiving discrimination related to healthcare (Maksut et al., 2017) or HIV (Fallon et al., 2017) was also associated with decreased awareness of PrEP.

2.5.2.2 Emotional illness representation

Emotional responses to PrEP help to shape African American MSM’s emotional representation of the threat of HIV (Leventhal et al., 1980) affecting their perceptions of the usefulness of PrEP as a method of HIV-prevention. Only three studies (T. Arnold et al., 2017; Brooks, Lee, Stover, & Barkley, 2011; Cahill et al., 2017) discussed emotional response related to PrEP. Two studies reported that African American MSM who were worried about becoming infected with HIV were more willing to use PrEP as an HIV-prevention method (Brooks, Lee, et al., 2011; Cahill et al., 2017). T. Arnold et al. (2017) also reported that worry about HIV status contributed to African American MSM’s willingness to use PrEP. However, study participants were also worried about charges for PrEP showing up on their parents’ insurance plan. One study
reported African American MSM were fearful of contracting HIV from PrEP (Brooks et al., 2012; Cahill et al., 2017).

2.5.2.3 Cognitive illness representation

A cognitive illness representation is a framework for developing a plan of action to prevent an adverse outcome: an HIV-infection (Diefenbach & Leventhal, 1996). This framework helped African American MSM decide if PrEP was a suitable method of HIV-prevention for them. Perception of risk, preference for particular HIV-prevention strategies, safety and efficacy, cost and financial coverage, and knowledge helped to shape how African American MSM viewed PrEP as a method for HIV-prevention.

2.5.2.3.1 Perception of risk for HIV

Perception of risk for contracting HIV served as both a barrier and a facilitator to participants’ willingness to use PrEP. Lower perception of risk was linked to an unwillingness to use PrEP, while a higher risk perception was linked to increased willingness to take PrEP. Several studies reported factors that contributed to African American MSM’s low willingness to use PrEP. Having a lower perception of risk (Ojikutu et al., 2018), knowing their sexual partner’s HIV-negative status (Rolle, Rosenberg, Siegler, et al., 2017), being sexually inactive (Rolle, Rosenberg, Luisi, et al., 2017), believing they were not at risk for HIV (R. E. Perez-Figueroa, Kapadia, Barton, Eddy, & Halkitis, 2015), not engaged a consistent relationship (R. A. Brooks et al., 2011), involved in a monogamous relationship (T. Arnold et al., 2017; R. E. Perez-Figueroa et al., 2015), using condoms with PrEP (Eaton et al., 2014b), and having sex with a female partner (Arrington-Sanders et al., 2016) were associated with low willingness to use PrEP.

African American MSM were more willing to use PrEP if they perceived themselves at high risk for HIV. Arrington-Sanders et al. (2016) reported high perception of risk was as an influencing factor for willingness to use PrEP but did not measure any influencing factors.
Several studies reported perceived HIV discrimination (Fallon et al., 2017), anticipating future condomless sex (Rolle, Rosenberg, Siegler, et al., 2017), sex with a serodiscordant partner (T. Arnold et al., 2017; Brooks et al., 2012), history of an STI (Khanna et al., 2016; Rolle, Rosenberg, Siegler, et al., 2017), engaging in high risk sexual activities (Mantell et al., 2014), and having anonymous or multiple partners (T. Arnold et al., 2017) were linked with higher willingness to use PrEP.

2.5.2.3.2 Preference for HIV-prevention strategies

Some studies reported that African American MSM did not like PrEP as a prevention strategy (Hoots et al., 2016; Mantell et al., 2014). Reported reasons for disliking PrEP as a prevention strategy were using HIV medicines as a form of protection (Brooks et al., 2012), taking a daily pill (Ojikutu et al., 2018; J. Raifman et al., 2017; Rolle, Rosenberg, Luisi, et al., 2017), and a preference for condoms over PrEP (Brooks et al., 2012; Galindo et al., 2012). African American MSM who were willing to use PrEP as a prevention strategy believed PrEP provided them with extra protection and made them feel less at risk for HIV (R. A. Brooks et al., 2011; Brooks et al., 2012; Galindo et al., 2012; R. E. Perez-Figueroa et al., 2015; Rolle, Rosenberg, Luisi, et al., 2017) and could protect them in event of risky sexual encounter (e.g. no condom) (Galindo et al., 2012).

2.5.2.3.3 Efficacy and safety

Several studies reported that African American MSM’s perception of the efficacy and safety of PrEP were both potential barriers and facilitators to use. Overall, African American MSM who did not want to use PrEP did not trust it as an effective HIV-prevention method (Brooks et al., 2012; Cahill et al., 2017; Ojikutu et al., 2018), believing it would not decrease their risk for HIV (Galindo et al., 2012; Raifman, Flynn, & German, 2017). In one study, African American MSM were only willing to use PrEP if it was 100% effective (Crosby et al., 2014).
Other studies reported side effects (Bauermeister et al., 2013; Brooks et al., 2012; Cahill et al., 2017; Eaton et al., 2014b; Galindo et al., 2012; Mantell et al., 2014; Ojikutu et al., 2018; R. E. Perez-Figueroa et al., 2015), concerns about the effects of long-term PrEP use (Cahill et al., 2017), and its interactions with recreational drugs and prescription medications (Cahill et al., 2017) as a barrier to PrEP uptake.

In contrary, other studies reported African American MSM would use PrEP if it was between 50% (Crosby et al., 2014; Mantell et al., 2014) and 75% effective (Crosby et al., 2014). In another study, African American MSM would only consider PrEP if they knew someone who taking it for a period of time (Cahill et al., 2017). This same study reported that having more information about the side effects of PrEP would help participants to decide if PrEP were something they would use (Cahill et al., 2017).

2.5.2.3.4 Cost and financial coverage

African American MSM’s perceived ability to cover the cost of PrEP was measured in several studies (T. Arnold et al., 2017; Bauermeister et al., 2013; Crosby et al., 2014; Eaton et al., 2014b; Galindo et al., 2012; Ojikutu et al., 2018; R. E. Perez-Figueroa et al., 2015; Rolle, Rosenberg, Luisi, et al., 2017). African American MSM reported having no health insurance (R. A. Brooks et al., 2011; Eaton et al., 2014a) or using their parents’ insurance (T. Arnold et al., 2017) as barriers to using PrEP. R. E. Perez-Figueroa et al. (2015) believed that, due to the cost of PrEP and the persistent racial inequalities in income and wealth, white MSM receive the most benefit from PrEP.

Other studies reported that PrEP was free (Crosby et al., 2014; Grov et al., 2015; Rolle, Rosenberg, Luisi, et al., 2017) or had a low copay (<$20) (Eaton et al., 2014b) it would facilitate increased uptake for African American MSM. Additionally, insurance coverage for PrEP (Rolle, Rosenberg, Siegler, et al., 2017) and the use of pharmaceutical sponsored medication programs (T. Arnold et al., 2017; Rolle, Rosenberg, Siegler, et al., 2017) would facilitate PrEP uptake. One
study reported that some African American MSM would be willing to use PrEP, even at costs up to $1,000 a month (Crosby et al., 2014). However, some African American MSM reported that they would be unwilling to use PrEP, even if PrEP were free (Crosby et al., 2014; Grov et al., 2015; Rolle, Rosenberg, Luisi, et al., 2017).

### 2.5.2.3.5 Knowledge

Some studies reported that African American MSM lacked sufficient knowledge of how to obtain PrEP in general (Brooks, Kaplan, et al., 2011; Cohen et al., 2015). Galindo et al. (2012) reported that some African American MSM had confused PrEP with their understanding of post-exposure prophylaxis (PEP). In line with these findings, African American MSM reported they needed more information about PrEP before deciding if PrEP was the best choice for them (Perez-Figueroa et al., 2015). The authors of two studies developed PrEP educational interventions to increase knowledge and uptake (Cohen et al., 2015).

### 2.5.2.4 Experiences in healthcare

African American MSM’s experiences in the healthcare setting varied; contributing to potential barriers and facilitators regarding their willingness for PrEP uptake. Experiences in healthcare included access and provider interactions.

#### 2.5.2.4.1 Access

Several studies reported access-related barriers and facilitators to PrEP use. Potential barriers to willingness for PrEP uptake included not having a primary care provider (Cahill et al., 2017) or access to routine health services (Cahill et al., 2017; Eaton et al., 2014; Raifman, Flynn, et al., 2017). Facilitators that were identified included seeking health services in a private clinic (Eaton et al., 2014), having visited a primary care provider in the past year (Raifman, Flynn, et al., 2017), having a regular medical provider (Eaton et al., 2014; Khanna et al., 2016), past HIV testing (Eaton, Driffin, et al., 2015), meeting with an HIV outreach worker (Khanna et al., 2016),
and participating in an HIV program or research study (Khanna et al., 2016). A PrEP evaluation study reported increased PrEP uptake for African MSM who enrolled in a PrEP program at the same rate as white MSM (Cohen et al., 2015). Another study reported that having the option of same-day access to PrEP (PrEP prescription on the initial visit) increased uptake of PrEP (Rolle, Rosenberg, Siegler, et al., 2017). However, one study reported African American MSM were less likely to self-refer themselves for PrEP, as compared to white MSM (Cohen et al., 2015).

Some African American MSM expressed a willingness to use PrEP because using PrEP meant increased access to preventive health services (Galindo et al., 2012), free HIV testing and counseling and sexual healthcare (Raifman, Nunn, et al., 2017). In contrast, other African American MSM reported that the frequent medical visits (T. Arnold et al., 2017; Eaton et al., 2014; Galindo et al., 2012) and HIV testing would be too burdensome and a deterrent to PrEP use (Eaton et al., 2014).

2.5.2.4.2 Provider interactions

African American MSM preferred that PrEP be discussed during routine clinical care (Cahill et al., 2017). However, one study reported that African American MSM who were unaware of PrEP never had a discussion with their health providers about PrEP (Raifman, Flynn, et al., 2017), while in other studies, the healthcare provider did discuss and recommend PrEP (Cohen et al., 2015; Rolle, Rosenberg, Siegler, et al., 2017). Hoots, Finlayson, Nerlander, and Paz-Bailey (2016) reported that African American MSM were less likely to have an indication for PrEP, in comparison to white and Latino/Hispanic MSM, as African American MSM were more likely to report fewer risk behaviors.

Another barrier to PrEP awareness was discussing same-sex desires/behaviors with healthcare providers. Several studies reported that African American MSM did not feel comfortable discussing their sexuality with healthcare providers (Arrington-Sanders et al., 2016; Cahill et al., 2017; Eaton et al., 2014); Maksut et al. (2017 2017 #7282); (Raifman, Flynn, et al.,
2017) reported that African American MSM did feel comfortable discussing same-sex behaviors with their healthcare providers. An interesting finding was that Raifman, Flynn, et al. (2017) reported that some African American MSM in the study reported a lower desire for agency when it came to medical decisions, resulting in a lower willingness to use PrEP. Yet, in another study, African American MSM reported receiving insensitive or incompetent care at a higher rate than do white MSM, but they were less likely to report switching medical providers in comparison to white MSM (Cahill et al., 2017).

2.5.2.5 Cultural and social factors

Cultural factors affecting African American MSM’s engagement in the healthcare setting included medical mistrust and perceived discrimination. Being part of a religious community (T. Arnold et al., 2017), believing in HIV conspiracy theories (Brooks et al., 2017; Ojikutu et al., 2018), and reporting race-based (Maksut et al., 2017; Ojikutu et al., 2018) or sexuality-based discrimination decreased willingness to use PrEP (Cahill et al., 2017; Maksut et al., 2017).

African American MSM reported distrust of clinical trials (Cahill et al., 2017; Galindo et al., 2012; Rolle, Rosenberg, Luisi, et al., 2017), medicine (Eaton et al., 2014b), pharmaceutical companies (Cahill et al., 2017; Galindo et al., 2012; Rolle, Rosenberg, Luisi, et al., 2017), and healthcare providers (Eaton et al., 2014b; Galindo et al., 2012), which also decreased their willingness to use PrEP. Study participants reported that the African American community had a strong aversion to engagement in the healthcare system (Cahill et al., 2017) stating that African Americans received worse healthcare in comparison to that received by other racial groups (Eaton et al., 2014b).

Social stigma was another important factor affecting why African American MSM were reluctant to seek PrEP services, including stigma related to same-sex desires (Cahill et al., 2017; Fallon et al., 2017), HIV stigma in society (Cahill et al., 2017), and stigma related to PrEP use (J. Raifman et al., 2017), and fear of an HIV-positive test result (Cahill et al., 2017). However,
similar to findings on perception of risk, African American MSM who perceived high levels of HIV discrimination were more likely to want to take PrEP (Fallon et al., 2017).

2.5.2.6 PrEP as a coping strategy

In the adapted Common Sense Model of Illness Representation, PrEP is used as a coping strategy to reduce African American MSM’s risk for an infection with HIV. The literature presented several factors that could explain lower PrEP use among African American MSM. However, the literature also provided evidence that African American MSM were more willing to use PrEP (Gamarel & Golub, 2015; Golub, Kowalczyk, Weinberger, & Parsons, 2010; Hoots et al., 2016; Mantell et al., 2014; Rolle, Rosenberg, Siegler, et al., 2017), as compared to white MSM (Gamarel & Golub, 2015; Golub et al., 2010) once they were educated on PrEP.

2.5.3 Healthcare Providers and PrEP

2.5.3.1 Stimulus: Awareness of PrEP

A number of studies reported that some health providers were not aware or had a low awareness of PrEP. Healthcare providers reported they never heard of (Logo & Danawi, 2016), had very little knowledge about PrEP (Krakower et al., 2017; Logo & Danawi, 2016; Smith, Mendoza, Stryker, & Rose, 2016), or were not familiar with PrEP guidelines (Logo & Danawi, 2016). In contrast, other studies reported that healthcare providers had heard about PrEP (Calabrese et al., 2017; Doblecki-Lewis & Jones, 2016; Logo & Danawi, 2016), the iPrEX study (Tellalian, Maznavi, Bredeek, & Hardy, 2013), the CDC guidelines for prescribing PrEP (Tellalian et al., 2013), or had read PrEP practice guidelines or protocols (Smith et al., 2016). In one study, medical students reported learning about PrEP in their medical training program (Calabrese et al., 2017).

2.5.3.2 Cognitive Illness Representation

Healthcare providers reported considering several factors when deciding to prescribe
PrEP, including: their knowledge of PrEP guidelines and protocols, assessment of patient HIV risk, cost and financial coverage of PrEP, monitoring and adherence, and need for specialized training for staff.

2.5.3.2.1 Knowledge of PrEP guidelines and protocols

Several studies reported health providers were able to describe current PrEP protocols (Doblecki-Lewis & Jones, 2016), were comfortable prescribing (Calabrese et al., 2016), and felt comfortable tailoring guidelines to their clinical practice (Calabrese et al., 2016; Krakower et al., 2017; Mullins et al., 2015). However, healthcare providers were unsure of PrEP guidelines (Clement et al., 2017) and were uncomfortable prescribing PrEP (Calabrese et al., 2016; Clement et al., 2017), but had a desire to learn more about PrEP (Krakower et al., 2017). In addition, different views among providers concerning the appropriateness of PrEP as an HIV-prevention strategy have been reported, with some studies indicating that providers agree it is an effective method (Tellalian et al., 2013) and others reporting that providers prefer to expand HIV testing for prevention services over PrEP use for prevention (Calabrese et al., 2016; Tellalian et al., 2013).

2.5.3.2.2 Assessment of patient HIV risk and PrEP

Healthcare providers reported varying levels of knowledge about the risk profiles for their clinic with some studies reporting that healthcare providers did not know or had a low perception of HIV rates in the patient population of their practice (Smith et al., 2016). Several studies reported a number of barriers leading to this varying assessment of patient HIV risk, including never asking questions about sexual risk (Doblecki-Lewis & Jones, 2016), discomfort when discussing sexuality (Calabrese et al., 2016), only offering patients HIV testing upon patient request, such as during STI testing, or never offering HIV testing at any time (Smith et al., 2016). Studies identified that healthcare providers had differing opinions of and practices for
prescribing PrEP. Some providers were willing to prescribe to low-risk patients who did not meet CDC PrEP guidelines (E. Arnold et al., 2012; Calabrese et al., 2016; Krakower et al., 2017). Other providers preferred to prescribe to high-risk patients (e.g., serodiscordant partners, high number of sexual partners) (E. Arnold et al., 2012; Doblecki-Lewis & Jones, 2016; Krakower et al., 2017; Mullins et al., 2015; Smith et al., 2016; Tellalian et al., 2013), MSM (Smith et al., 2016). At the same time, some studies found that healthcare providers reported never having a patient request PrEP (Clement et al., 2017; Doblecki-Lewis & Jones, 2016; Logo & Danawi, 2016), and others did not prescribe PrEP even when the patients requested it (Doblecki-Lewis & Jones, 2016; Tellalian et al., 2013).

One commonly cited barrier to prescribing PrEP were healthcare providers concerns about increased sexual risk in their patients once they were taking PrEP (E. Arnold et al., 2012; Calabrese et al., 2017; Tellalian et al., 2013), without condoms (Calabrese et al., 2017), notably if the patient was an MSM (Doblecki-Lewis & Jones, 2016). Two studies (Calabrese et al., 2017; Calabrese et al., 2014) measured the effect of healthcare provider bias based on patients' race. In these studies, medical students who were white heterosexual males, with fewer years in medical school were less likely to prescribe PrEP to African American MSM. The medical students reported they were more concerned about risk compensation, increase in condomless sex, poor adherence, in African American MSM, versus white MSM (Calabrese et al., 2017; Calabrese et al., 2014).

2.5.3.2.3 Cost and financial coverage

Healthcare providers were concerned about the high cost of PrEP (Arnold et al., 2012; Calabrese et al., 2016; Tellalian et al., 2013), insurance and prescription requirements (Calabrese et al., 2016), and cost of laboratory testing and medical visits (Calabrese et al., 2016; Clement et al., 2017) for their patients. However, providers who successfully prescribed PrEP used patient
financial assistance programs (Calabrese et al., 2016; Clement et al., 2017; Doblecki-Lewis & Jones, 2016), and collaborated with local health departments to reduce laboratory costs (Calabrese et al., 2016).

2.5.3.2.4 Monitoring and adherence

Several studies reported that healthcare providers had concerns regarding the burden that of monitoring and adherence placed on their patients (E. Arnold et al., 2012; Calabrese et al., 2016; Doblecki-Lewis & Jones, 2016; Mullins et al., 2015; Tellalian et al., 2013) and certain patients difficulty with maintaining clinical appointments (E. Arnold et al., 2012). Healthcare providers were also concerned about side effects (E. Arnold et al., 2012), antiretroviral resistance, and stigma associated with use of PrEP (E. Arnold et al., 2012; Tellalian et al., 2013), mainly if they were young MSM and MSM of color (E. Arnold et al., 2012; Mullins et al., 2015) and this would all affect PrEP uptake. One study reported that public health clinics preferred to prescribe PrEP to the highest-risk patients (serodiscordant couples, a history of rectal infections, or previously used PrEP), as their practices did not have the resources to accommodate the volume of patient follow-up visits (staffing, laboratory testing, etc.) (E. Arnold et al., 2012).

2.5.3.2.5 Training and staff support

A final factor influencing PrEP prescribing among providers included the need for increased training and staff support to accommodate the additional screening, follow-up, adherence, and monitoring. Specifically, a number of studies reported that in order to scale up PrEP prescribing, primary care providers needed specialized PrEP training (E. Arnold et al., 2012; Calabrese et al., 2016; Clement et al., 2017; Doblecki-Lewis & Jones, 2016; Mullins et al., 2015), dedicated staff for insurance paperwork (Calabrese et al., 2016), and infectious disease specialists for consultation (Clement et al., 2017)
2.5.3.3 Individual Characteristics

Several studies that reported that certain characteristics of healthcare providers influenced their willingness to prescribe PrEP. Healthcare providers who were still in training (Clement et al., 2017), were a generalist/primary care provider (Krakower et al., 2017), or never treated an HIV-negative MSM patient (Krakower et al., 2017) were less likely to prescribe PrEP. Comparatively, other providers who were more likely to prescribe PrEP were those under the age of 55 (Smith et al., 2016) or an advanced practice provider (Clement et al., 2017).

2.5.3.4 Experiences with Healthcare

Healthcare providers who were comfortable prescribing PrEP had more experience with LGBT health (E. Arnold et al., 2012; Krakower et al., 2017) and patients diagnosed with HIV (E. Arnold et al., 2012). In addition, providers with more experience prescribing antiretroviral medicines (ART) (E. Arnold et al., 2012; Doblecki-Lewis & Jones, 2016; Krakower et al., 2017; Logo & Danawi, 2016; Smith et al., 2016), routine follow-up care (E. Arnold et al., 2012; Smith et al., 2016; Tellalian et al., 2013) were more likely to prescribe PrEP.

2.5.3.5 PrEP as a Coping Strategy

Based on the adapted Common Sense Model of Illness Representation, healthcare providers would prescribe PrEP as a coping strategy selected for their patients at highest risk, to reduce their risk for an infection with HIV. The literature provided evidence that there are a number of factors that influence whether healthcare providers prescribe PrEP. Awareness of and knowledge of, and comfort with PrEP protocols having the resources to routinely monitor patients on PrEP, and attitudes towards specific patient populations and PrEP as a prevention method were key factors in PrEP being utilized as a prevention tool.
2.6 Discussion

This integrative literature review synthesized the findings from 42 studies, examining the potential barriers to and facilitators of African-American MSM's use of PrEP. The adapted Common Sense Model of Illness Representation was used as a guiding theoretical framework for this review.

Both African American MSM and healthcare providers either were not aware of PrEP or had a low level of knowledge of PrEP. The healthcare provider serves as a gate-keeper for PrEP and is the best person to educate patients about PrEP (E. Arnold et al., 2012). In order for PrEP to be presented as a viable option for HIV-prevention, the patient, or more importantly, the healthcare provider needs to be aware of and highly knowledgeable about PrEP (Centers for Disease Control, 2014).

Another factor was perception of risk. African-American MSM were less likely to report risk factors that would make them good candidates for PrEP. Additionally, African-American MSM were less likely to discuss their sexuality with healthcare providers. Similarly, some healthcare providers did not feel comfortable asking their patients about their sexuality or sexual behaviors. Similar to awareness of PrEP, the healthcare provider needs to be aware of his or her African American MSM patient’s risk profile to make a determination if PrEP is an appropriate method of prevention to employ. Such an open discussion would enable African American MSM to become aware of PrEP and be educated on its purpose and potential benefit, allowing for a shared illness representation between the patient and the provider.

The review of literature also provided evidence of factors that affect healthcare providers' ability to provide unbiased and culturally appropriate healthcare to African American MSM. The larger sociocultural context influences healthcare providers' negative beliefs and attitudes concerning sexuality and race. The findings that healthcare providers possess racial and sexuality-based biases has been well-documented in the literature (Arnold, Rebchook, & Kegeles, 2014;
Cahill et al., 2017; Chae, Nuru-Jeter, & Adler, 2012; Jee-Lyn Garcia & Sharif, 2015; Mathur, Richeson, Paice, Muzyka, & Chiao, 2014; Mays, Cochran, & Barnes, 2007). Medical education and clinical training can challenge these beliefs and attitudes concerning sexuality and race, giving the healthcare provider the medical knowledge and training needed to form accurate representations of illness in order to treat patients (Chang, Simon, & Dong, 2012; Grant et al., 2012). However, if the healthcare provider's education and clinical experiences are lacking critical content concerning issues of race, sexuality, and health, they will be ill-prepared to effectively engage African American MSM during a clinical visit (Jee-Lyn Garcia & Sharif, 2015). These factors contribute to barriers to communication about sexuality and sexual behaviors between African American MSM and their providers, which leads to decreased access to HIV testing and PrEP, and increased rates of HIV infection in African American MSM.

The cost of PrEP was another factor that found to be a barrier to PrEP uptake. African-American MSM and health care providers were concerned about their patients' ability to pay for PrEP, insurance coverage, and the burden of routine clinical visits every three months. However, pharmacy and pharmaceutical drug-assistance programs helped to increase uptake of PrEP for African American MSM. Given the success of these financial assistance programs, expanding pharmaceutical and pharmacy financial aid programs for PrEP, could increase access to those who are more likely not to have insurance or to have lower incomes or financial hardship, both of which create a barrier to PrEP use.

2.6.1 Gaps in the Adapted Common Sense Model

The review of the literature provides support for most of the assumptions of the adapted Common Sense Model. Individual characteristics such as age, SES, sexual orientation, emotional status, and African American MSM’s previous experiences with health care providers and the healthcare system directly impact their process of developing an illness representation. Similarly,
health care providers' age, race, gender, type of clinical practice, clinical education and training, all affect their interaction with their MSM clients, and therefore, their illness representations.

A gap in the model, as well as the literature, was the healthcare provider's emotional representation of illness. As a patient, it is reasonable to expect a person to have an emotive response to a serious health threat such as HIV. As the literature suggests, healthcare providers' bias has roots in societal norms (Calabrese et al., 2017; Calabrese et al., 2014) and their past experiences with African Americans, youth, and MSM (Mullins et al., 2015).

The adapted Common Sense Model of Illness Representation was useful in guiding the exploration of the relationship between African American MSMs and their healthcare providers and how this relationship affects their access to PrEP. The review also provided strong evidence of the important role healthcare providers have in determining influencing access to PrEP and ultimately the reduction of new HIV infections in African American MSM. The literature highlighted the importance and critical need for medical and nursing programs to teach providers how to communicate about sexuality with their patients which in turn can influence the decisions of the provider regarding PrEP. To achieve this goal, there must first be an understanding of the healthcare needs of African American MSM.

2.6.2 Limitations

Many of the findings in this review were cross-sectional studies, which limits the finding to one-time point. People's awareness and understanding of PrEP evolves; as such, this review may not be an accurate account of African American MSM's and healthcare providers current understanding and use of PrEP. Additionally, new research on PrEP is published at a rapid rate, quickly adding to the body of knowledge about PrEP. Another limitation was that many studies excluded from this review had an ethnically diverse sample; however, they did not complete
separate analyses by race. It is possible that those studies contained new and important information pertaining to barriers and facilitators of PrEP use in African American MSM.

2.6.3 Implications

It is clear more research needs to focus on the factors that affect African American MSM's ability to access HIV-prevention services (Maulsby et al., 2014; Millett et al., 2011). Researchers need to have a better understanding of the roles of stigma, discrimination, and trust, and how these concepts impact the relationship between African American MSM and their healthcare providers, and access to PrEP (Calabrese et al., 2014; Fay et al., 2011; Levy et al., 2014; Malebranche, Peterson, Fullilove, & Stackhouse, 2004; Maulsby et al., 2014). Additionally, it is still not known to what extent that healthcare providers develop an emotional representation and how this representation influences their prescribing practices for PrEP.

2.6.4 Key Considerations

- Healthcare providers can have negative beliefs and attitudes concerning sexuality and race, which can affect patients' care, further contributing to health disparities. Medical training programs need to develop curricula that can help healthcare providers identify and address this bias.

- Future research needs to explore how the expansion of pharmacy and pharmaceutical medication assistance programs can aid in scaling up PrEP historically marginalized populations.

3.1 Introduction

Once-daily oral co-formulated tenofovir disoproxil fumarate and emtricitabine [FTC/TDF] also known as pre-exposure prophylaxis (PrEP) is an underutilized method to decrease rates of HIV in African American young men who have sex with men (YMSM) (Grant et al., 2010; Volk et al., 2015). PrEP has been shown to decrease rates of new HIV infections in MSM when coupled with targeted HIV-prevention counseling and education (Grant et al., 2010). Despite the availability of PrEP, rates of HIV in African American YMSM continue to rise (Eaton, Driffin, et al., 2015; Kirby & Thornber-Dunwell, 2014). African American YMSM’s uptake of PrEP occurs at a lower rate than their white counterparts (Eaton, Driffin, et al., 2015; Kirby & Thornber-Dunwell, 2014). This may be due to PrEP programs not taking into account cultural or social factors that may affect PrEP uptake such as racism, homophobia, HIV stigma, and the internalization of these factors that uniquely affect African American YMSM (Halkitis, 2010; Halkitis, Wolitski, & Millett, 2013; Harper, 2007). Therefore, it is vital to understand the role of cultural and social factors that influence African American YMSM’s willingness to access PrEP.

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3.1.1 Racism

African American adolescents and young adults, in general, perceive more racial or ethnic discrimination as compared to their White and Hispanic counterparts (Seaton, 2006; Tynes, Giang, Williams, & Thompson, 2008). African American adolescents and young adults have reported racist and discriminatory events from within their social networks (Tynes et al., 2008) and society at large (Assari & Caldwell, 2017). Racism and discrimination are experienced and reported at higher rates by African American males, versus African American females, particularly if they are of a darker complexion (Assari & Caldwell, 2017).

African American YMSM have also reported experiencing racial discrimination within the MSM community (Millett, Peterson, et al., 2012). Racial discrimination in the MSM community can show up in the form “sexual racism” or the deliberate selection and exclusion of sexual partners based solely on race (Bedi, 2015). Sexual racism is seen when meeting sexual partners, in person (Denton, Martin, & Christy, 2015) or online (J. White, Reisner, Dunham, & Mimiaga, 2014), with African American MSM sometimes located at the bottom of the dating selection hierarchy (G. Phillips, Birkett, Hammond, & Mustanski, 2016; J. White et al., 2014).

Conversely, African American YMSM have reported that they have been sought out by other racial groups for sexual experiences because of “positive stereotypes” of African American males’ sexuality and sexual characteristics (e.g. large penis size) (Rhodes et al., 2011). Czopp (2008) defines positive stereotypes as:

…”compared to negative stereotypes, people are less likely to perceive positive stereotypes as inappropriate and consequently do not correct for their influence in social judgments…[positive] stereotypes can be considered positive and confer some sort of ‘advantage’ to members of these groups over non-members…they are inherently restrictive [and] are based solely on group membership rather any individuating information, maintain a complementary relation with more negative stereotypes so as to ensure that members of target groups can always be denigrated. – (Czopp, 2007, p 414).
Positive stereotypes of African American males’ sexuality (e.g. large penis size, hypermasculine, sexually dominant and rhythmic, etc.) has been documented by others in the literature (Ferber, 2007; Kay, Day, Zanna, & Nussbaum, 2013; Teunis, 2007). Teunis (2007) states positive stereotyping of African American males’ sexuality is based on sexual objectification. In his study, Teunis reported that African American MSM who internalize these messages were more likely to assume the penetrative position during sex, unprotected, despite having a different preference in sexual positioning, upon the request of their white MSM sexual partners.

While the effects of racism on PrEP use in African American YMSM has been studied, the focus of this research has been limited to the clinical setting (Calabrese et al., 2017; Calabrese et al., 2014; Underhill et al., 2015). To date, there have been no known studies that have qualitatively explored how experiences with sexual racism influences African American YMSM’s willingness to access PrEP.

3.1.2 Homophobia

In addition to racial discrimination, African American YMSM also deal with homophobia, or negative reactions, irrational fear, or hatred towards gay persons (Eguchi, 2006). Acts of homophobia can manifest as verbal attacks (Reilly et al., 2015) or rejection from family and friends, from within the African American community (Halkitis et al., 2013; Katz-Wise et al., 2014) and society as whole (Bauermeister et al., 2014). These experiences often stem from the dominant heterosexual culture (Calabrese et al., 2017; Harper, 2007) and the African American community’s negative attitudes concerning same-sex behaviors (Voisin et al., 2013). Such negative perceptions of the gay community can cause African American YMSM to avoid health and HIV-prevention programs targeted towards the MSM community (Jonsen & Stryker, 1993), thereby missing opportunities to learn about and obtain PrEP (Rucinski et al., 2013) and other HIV-prevention services (Reif, Sullivan, Wilson, Berger, & McAllaster, 2016).
3.1.3 HIV Stigma

Goffman (2009) describes stigma as the process of discrediting a person based on attributes that are often linked to stereotypes. Public health messages concerning the high rates of HIV in the African American MSM community can cause African American YMSM to feel as if they are being stigmatized as a group with HIV (Rowan, DeSousa, Randall, White, & Holley, 2014). African American YMSM often report high levels of “courtesy HIV stigma” from society (Mustanski et al., 2011), the African American community (Balaji et al., 2012; Millett, Peterson, et al., 2012), and from within the gay community (J. White et al., 2014), secondary to the high rates of HIV within the African American MSM community (Balaji et al., 2012). Courtesy stigma labels a group based on their association with another socially undesired group (R. Phillips, Benoit, Hallgrimsdottir, & Vallance, 2012).

HIV stigma associated with African American YMSM labels them as carriers and transmitters of HIV (Goffman, 2009), regardless of their HIV status (Parker & Aggleton, 2003). Targeted public health HIV awareness, educational campaigns, and media reports about the high rates of HIV in the African American community not only raised awareness for HIV rates in African American YMSM, but also negatively centered them in the HIV discourse (Voisin et al., 2013). Additionally, the book “On the Down Low,” by J. L. King and Hunter (2004) focused on “down-low,” also known as “men on the DL” in the African American community which heightened HIV fear towards African American YMSM (Goparaju & Warren-Jeanpiere, 2012). As a result, African American MSM were perceived to be transmitters of HIV to both men (Millett et al., 2006) and women (Goparaju & Warren-Jeanpiere, 2012), both within and outside the African American community (Millett et al., 2006).

African American YMSM who internalize this HIV stigma may have misinformation about HIV transmission (Bird & Voisin, 2013). Furthermore, African American YMSM who have received HIV-prevention messages/interventions may express a sense of hopelessness
regarding their risk for HIV believing a future with HIV infection is inevitable, secondary to familial rejection or messages related to the prevalence of HIV in the gay community (Mustanski et al., 2011; Voisin et al., 2013; Yi et al., 2011). As a result, internalized HIV stigma can lead to a reluctance of African American YMSM to seek HIV-prevention services (Voisin et al., 2013) or utilize PrEP, as some perceive PrEP for only treating HIV (Cahill et al., 2017; Herron, 2016).

3.1.4 Risk Perception

Experiences with racism, homophobia, and HIV stigma can cognitively modify African American YMSM’s existing attitudes and personal beliefs about themselves (Balaji et al., 2012; Ma, 2012) and their risk for HIV (Bränström & Brandberg, 2010), resulting in alterations in self-concept and behavior (Bell, Zimmerman, Almgren, Mayer, & Huebner, 2006). Repeated exposure to messages about the prevalence of HIV in the African American MSM community can shape how African American YMSM see their own risk for HIV (Eaton & Kalichman, 2010; Rowan et al., 2014; Voisin et al., 2013) and the risk of others in their sexual networks (E. Arnold, Rebchook, & Kegeles, 2014), prompting action to reduce their risk for an infection with HIV (Irvin et al., 2015).

Therefore, it is essential to understand what cultural and social factors influence African American YMSM’s willingness to access PrEP. The aims of this study are to 1) explore how experiences with HIV stigma and racism shape the perceptions perception of HIV risk of African American YMSM, 2) examine how racism and HIV stigma influence sexual partner selection for African American YMSM, and 3) discuss how perceptions of HIV risk and internalized HIV stigma affect the likelihood of future PrEP use.
3.2 Methods

3.2.1 Design

This study used an exploratory qualitative design to explore factors that influenced African American YMSM’s likelihood to use PrEP use as an HIV-prevention method.

3.2.2 Study Sample and Setting

The participants were recruited from the Triad, Triangle, Charlotte metropolitan areas of North Carolina and the Baltimore-Washington Metropolitan area of Maryland. Similar to African American YMSM nationally, African American YMSM in North Carolina and Maryland share a disproportionate burden of HIV. North Carolina is part of the Deep South, a region that has the highest rates of HIV in the nation, particularly for African American MSM (Reif, Safley, McAllaster, Wilson, & Whetten, 2017). In 2016, African American MSM, of all ages, comprised 69.3% of new HIV infections for MSM in North Carolina (Reif et al., 2017). The Baltimore-Washington area also has a high rate of new HIV infections. In 2016, African American MSM accounted for 63.5% of new HIV infections in MSM in Maryland (Maryland Department of Health, 2017), and 57% in Washington, D.C. (District of Columbia Department of Health HIV/AIDS STD, 2017).

The participants were recruited using a mix of purposive and snowball sampling. In order to be eligible for the study, participants had to 1) be between the ages of 16-24; 2) self-identify as African-American, black, or mixed race including African American or black; 3) have been assigned male sex at birth; 4) self-identify as gay, bisexual, or queer, or self-identify as a heterosexual male who has had a past voluntary sexual experience with another man or currently have sexual desires for men; 5) report being uninfected with HIV; 6) be mentally capable of providing informed consent; 7) be able to speak and read English; and 8) not be currently using
PrEP. Men living with HIV were excluded, as this study was focused on the prevention of HIV transmission.

Recruitment activities began June 2016 and ended December 2016 when data redundancy was noted. Recruitment activities used a mix of online and smartphone applications, in-person community and clinical engagement, and the use of respondent-driven sampling. IRB approval was obtained prior to the initiation of any study procedures and only approved flyers and media (hand cards, online advertisements) were used to promote the study via each of these methods.

3.2.3 Protection of Human Subjects

The participants signed a written informed consent prior to engaging in individual interviews. Data were collected via an investigator-developed semi-structured interview guide. The privacy and identity of participants were protected by the use of an alias chosen by the each participant prior to the start of the interview. Each participant was given a $25.00 Visa gift card to thank them for their time.

3.2.4 Data Collection

Data were collected via an investigator-developed semi-structured interview guide. These interviews captured participants experiences and opinions regarding their risk for HIV and their thoughts about PrEP as a method of HIV-prevention. A 10-minute demographic survey, administered at the beginning of the interview, captured individual characteristics and social and behavioral factors that might influence African American YMSM’s use of PrEP. A short description of PrEP was read to participants to be used as an elicitation device. This description included the efficacy of PrEP and requirements of clinical follow-up while on PrEP. The interviews lasted, on average, 60 minutes, but ranged from 35 minutes to 1 hour and 24 minutes. The interviews were digitally recorded and later transcribed.
3.2.5 Data Analysis

The audio files for the qualitative interviews were transcribed verbatim by a vetted transcriptionist to avoid misinterpretation of interview. The transcripts were then proofed against the audio files for accuracy, then read in its entirety by the primary researcher. The qualitative interview data were analyzed using NVivo 11 software (International, 2017) using directed content analysis (Hsieh & Shannon, 2005). First cycle coding consisted of in vivo and descriptive codes to capture participants experiences and thoughts related to their experiences seeking healthcare and conversations with providers about sexual health. (Miles, Huberman, & Saldaña, 2013; Saldaña, 2012). Analytic memos were created for each interview to capture the primary researcher’s in-depth thoughts about the interview, analysis process, and emerging themes (Miles et al., 2013; Saldaña, 2012).

The second level coding consisted of pattern coding, in which the codes were collapsed into smaller categories. Preliminary codes were used to form themes based on frequency, the similarity of core concepts and marked differences between participants' responses (Saldaña, 2012; M Sandelowski, 2000). Semantic relationships were used to organize codes based on participants' descriptions of their experiences with dating, racism, HIV stigma, and intentions to obtain PrEP (Miles, Huberman, & Saldana, 2014; Saldaña, 2012).

Descriptive statistics were used to summarize demographic data of the participants. SAS Version 9.3 was used to provide descriptive statistics for the study.

3.3 Results

3.3.1 Sample Characteristics

The final sample comprised 25 self-identified HIV-negative African American/Black YMSM, aged 18-24 (M = 21.0, SD = 2.0). All participants identified as African American. However, 13 (52%) of the sample also selected additional racial or ethnic identities; 2 (8%) were
Caucasian or white); 1 (4%) Asian or Pacific Islander; 2 (8%) Native American or Alaskan Native; 2 (8%) Latino or Hispanic; or 6 (24%) Multi- or Bi-Racial. One hundred percent of the men were born male at birth, and all but one identified as “male”; the one exception identified as “gender-nonconforming.” This participant was still included in the sample as this participant was socialized and treated as a male since birth, and therefore subjected to similar life experiences as other participants who identified as male. Seventy-six percent (n = 19) of the men identified as gay, with 96% (n = 24) reporting being part of the gay community. Thirty-two percent (n = 8) of the sample had completed college, or technical school and 24% (n = 6) had completed high school or GED. The majority of participants reported using dating apps to meet sexual partners 84% (n = 21).
Table 3. Individual Characteristics – Self-report

<table>
<thead>
<tr>
<th></th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (M= 21.0; SD = 2.0)</strong></td>
<td></td>
</tr>
<tr>
<td>18 -24</td>
<td>25 (100.00)</td>
</tr>
<tr>
<td><strong>Racial/ethnic identity</strong>*</td>
<td></td>
</tr>
<tr>
<td>African American/Black</td>
<td>25 (100.00)</td>
</tr>
<tr>
<td>Caucasian/White</td>
<td>2 (8.00)</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>1 (4.00)</td>
</tr>
<tr>
<td>Native American or Alaskan</td>
<td></td>
</tr>
<tr>
<td>Native</td>
<td>2 (8.00)</td>
</tr>
<tr>
<td>Latino or Hispanic</td>
<td>2 (8.00)</td>
</tr>
<tr>
<td>Multi- or Bi-Racial</td>
<td>6 (24.00)</td>
</tr>
<tr>
<td><strong>Sex at birth</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>25 (100.00)</td>
</tr>
<tr>
<td><strong>Gender identity</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>24 (96.00)</td>
</tr>
<tr>
<td>Gender Queer/</td>
<td>1 (4.00)</td>
</tr>
<tr>
<td>Gender Non-conforming</td>
<td></td>
</tr>
<tr>
<td><strong>Sexual orientation</strong></td>
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</tr>
<tr>
<td>Heterosexual</td>
<td>1 (4.00)</td>
</tr>
<tr>
<td>Gay Man</td>
<td>19 (76.00)</td>
</tr>
<tr>
<td>Same Gender Loving</td>
<td>2 (8.00)</td>
</tr>
<tr>
<td>Queer</td>
<td>4 (16.00)</td>
</tr>
<tr>
<td>Bisexual</td>
<td>5 (20.00)</td>
</tr>
<tr>
<td>Pansexual</td>
<td>4 (16.00)</td>
</tr>
<tr>
<td><strong>Educational attainment</strong></td>
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<tr>
<td>High-School or GED certificate</td>
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</tr>
<tr>
<td>Some college classes</td>
<td>11 (44.00)</td>
</tr>
<tr>
<td>Technical School</td>
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<tr>
<td>Associates Degree</td>
<td>2 (8.00)</td>
</tr>
<tr>
<td>Bachelor's Degree</td>
<td>4 (16.00)</td>
</tr>
<tr>
<td><strong>Met sexual partners</strong></td>
<td></td>
</tr>
<tr>
<td>Online/Internet Chat Rooms</td>
<td>8 (32.00)</td>
</tr>
<tr>
<td>Bars or Clubs</td>
<td>12 (48.00)</td>
</tr>
<tr>
<td>Through Friends</td>
<td>18 (72.00)</td>
</tr>
<tr>
<td>Dating Apps</td>
<td>21 (84.00)</td>
</tr>
<tr>
<td>Other: Whatsapp messenger</td>
<td>3 (12.00)</td>
</tr>
<tr>
<td><strong>Community Membership</strong></td>
<td></td>
</tr>
<tr>
<td>Gay/Bisexual</td>
<td>24 (96.00)</td>
</tr>
<tr>
<td>Ballroom (House Ball)</td>
<td>1 (4.00)</td>
</tr>
<tr>
<td>Hip Hop/Trap/Ratchet</td>
<td>2 (8.00)</td>
</tr>
<tr>
<td>Discreet/DL</td>
<td>2 (8.00)</td>
</tr>
<tr>
<td>Poly</td>
<td>2 (8.00)</td>
</tr>
<tr>
<td>Leather/Kink/BDSM/RolePlay</td>
<td>2 (8.00)</td>
</tr>
<tr>
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</tbody>
</table>

*Self-reported racial or ethnic identity

Participants allowed to select more than one response
3.3.2 Sexual Racism, Discrimination, and Stigma

Many of the participants reported meeting potential romantic or sexual partners by using online applications, social networks, and bars or clubs. These methods provided a convenient way to meet potential partners, but also exposed some of the participants to discrimination, stigmas, and stereotypes. Participants reported direct and indirect racist and stigmatizing commentary, typically linked to the African American community, which made participants feel like social pariahs and fetishized objects.

3.3.2.1 Sexual racism – “Gay black men are not seen as the desirable ones”

Some of the participants described selection bias against them in the dating scene. They perceived that because they were African American that YMSM of other races saw them as less desirable, and therefore passed them over as a potential sexual partner. One participant called these interactions “sexual racism,” where partner choice was not determined by compatibility, but by race. It should be noted that the participants who talked in-depth about sexual racism either currently or previously attended elite predominantly white universities.

…it’s called sexual racism. I think it’s something that prevails in predominantly white institutions, specifically for black gay men….it’s very hard to find men at my school that would be willing to have a sexual experience with me because of my ethnicity or race…so like I go to a predominantly white institution, where gay black men are not seen as the desirable ones on campus, in terms of the LGBTQ community. I even had a guy once tell me that, ‘You know I understand that like I'm being prejudiced towards black people and that I know that like it's bad, but I don't know how to change it. And I know that I don't like black men. And that like I understand that you're a good person, but, like for some reason I'm not attracted to darker skin, or like gay men that are also black. white – Dove, age 19

Another participant, who described himself as multiracial, talked about racist interactions he experienced on dating apps. He described how he benefitted from colorism. Colorism is the assignment of privilege to a person based on the lightness of their skin tone (L. M. Burton, Bonilla-Silva, Ray, Buckelew, & Hordge Freeman, 2010). He stated that white YMSM perceived
him differently because of his lighter-skin complexion, which allowed him to avoid some of the
negative stereotypes associated with darker-complected African American YMSM.

So, there is a degree of colorism in play. Well, many people usually perceive me
as being black, if especially if I am in the gay community as a whole…with
people who are white, they usually don't perceive many of the negative
connotations that come with dark skin per se. There is a considerable degree of
discrimination, but I typically just have to go out there and say, are you a racist,
etc., you know. – Kaiser, age 22

The racial discrimination did not appear to be limited to potential sexual partners who are
white YMSM but also occurred in the participants’ social networks. A participant
described an interaction with a person who tells him that he would be a good fit for his
friend, only if he were white.

Because they'll tell me, "Oh you're a good guy. If only you were white," or like,
"Oh man, if only you were white, you'd be perfect for my friend." So, it's like I'm
confused. So, I'm perfect, but because I'm black I'm not perfect? Like, now I'm
not able to be introduced to your friend, or now you don't want to have a sexual
experience with me because I'm black? Like what is that? What are you saying
that? – Dove, age 19

3.3.2.2 HIV stigma – "It seems like there's like a society consensus that HIV is a gay Black
man's disease."

In addition to racial discrimination, several participants described societal-level
stereotypes about the African American community related to sex and HIV. They stated the
pervasive perception was that African Americans, as a whole, were sicker that other racial
groups. They also reported hearing stereotypes about African American MSM. These stereotypes
often labeled all African American MSM as infected with HIV, spreading HIV to their
unknowing female partners.

Society loves to just label all young gay black males as HIV positive, and that’s
really inaccurate. – Ricardo, age 19

I feel like, in general, people expect black folks to be sickly in multiple
capacities. Then when you get, I guess, years of information saying that like
black gay men have higher rates of STIs, and black women are on the rise for
having HIV transmission because of their positive partners, who are going to
have sex with men, and not with their female partners.
The perception that they are stigmatized as a group with HIV seemed to frustrate many of the participants who spoke out about this. They felt that the black community, particularly the black gay community, was unfairly targeted with HIV stigma compared to other members of the gay community. One participant highlighted the differences in how the black gay community was portrayed in contrast to other communities.

I think once people hear HIV, they automatically associate it with gay people. They automatically think that since you're gay and black, you want to have sex with every single man out there. But that's not the case. So, once they have that assumption based on you, they think you have a higher risk of getting HIV, and that's why they call a ‘gay man’s disease.’ So, who would they rather associate being HIV positive with? White men or gay black men? So, by dissecting us, the gays, from the heterosexual majority, you’re putting us in a smaller circle. And then the blacks from the whites, that’s a smaller circle. And then they just pin it on us, when there are millions of gay white men who have HIV.

– Nick, age 20

3.3.2.3 Hypersexualizing of African American men – "Black men are fetishized and are viewed as hypermasculine studs."

Several of the participants said that African American men, especially African American MSM, were hypersexualized by other MSM and society in general, which tied into assumptions of why they were at higher risk for HIV. This hypersexualizing was often linked to historical stereotypes of African American men of being well-endowed and hypersexual.

I think black males are sexualized more, and so that brings on its own thing of like attraction…Basically, it's like penis size and pleasure I guess; you're freakier.
– Cheese, age 21

…people have like a view of once you are black, they have a view of what you should be like, stereotypes, like “thuggish” and the whole size thing…We’re all seen as being really sexually active, like, they see us like, having sex all the time, like sexually risky, no condoms, like just plain gay. But yeah, but the fact that the risk thing is like being really sexually active, more so than anybody else.
– Shaggy, age 22

But many black men who are very buff are fetishized to a large degree and are viewed as being viewed as hypermasculine studs per se. As a result, a stud doesn't care about himself. He just goes and has sex and just rah, rah, rah and stupid trivial, superficial bullshit like that...
– Kaiser, age 22
With additional probing, the participants offered their own hypotheses for why these perceptions existed and persisted. Several discussed frequent stereotypical media portrayals as one reason.

The participants felt that the media portrayal of African American MSM was biased and based upon social stigmas (hypersexual, “down-low,”). Participants stated that these media portrayals feed into society’s perception of them as a group.

…they're portrayed, as a whole people with HIV in the gay community…But when you like, for example seeing a Tyler Perry movie and they have a gay actor, it's always sort of the over-masculine, down low, or hidden guy that tends to get in these situations where he ends up contracting HIV or a different virus. Then he has to be exposed and sort of pariah for it – James, age 23

Another participant talked about his perception of HIV-prevention messages targeted towards the African American community. This participant believed there was an overemphasis on HIV in the African American community versus other communities.

I mean I don't feed into TV and all of that type of stuff because I think that's where it comes from. TV will market it for gay men. TV will market it for African American population, and you know I don't really see it like that. Cause that's something that anybody can really get it. I mean, yeah, it affects me because I'm a part of the YMSM, but I don't have like a specific perception. – Garrett, age 24

3.3.2.4 Rejecting the narrative - “I don’t want people to stigmatize my communities.”

Many of the participants tried to offer a counter-narrative, stating that other communities are affected by HIV as well. However, they acknowledged that the “black –HIV” narrative still seemed to stick.

I always try to tell people that it's not just in the gay community. But it's just more talked about. And it's more relevant in our community, because to everybody they feel as if you're gay you're susceptible to it. But when you're straight, you're not. – Max, age 24

…you know I don’t think I’ve inherently thought of HIV as a homosexual disease, but it’s definitely been taught to me that way. I think I have taught myself otherwise that any human can contract a disease like HIV. But it has definitely been enforced on me to be extra extra careful about that one, as opposed to any other STD I could contract, you know… it seems like there’s like a society consensus that HIV is like a gay black man’s disease.
3.3.2.5 Internalizing messages – “There’s all of this mental calculus that goes on with risk.”

The participants talked a great deal about racist, discriminatory, and stereotyping messages and interactions they experienced while dating and in everyday life. Although many of them expressed displeasure over these interactions and comments, quite a few of the participants internalized these messages, which shaped how they viewed themselves and other black YMSM in their communities.

Well they say that we are the highest race that gets HIV, and then by me being a homosexual black male, I think my risk is pretty high, higher than the normal black person. – Dog, age 22

I think it’s [my risk] a little more than average, but then again, you can’t put nothing past nobody just because you gay, you gonna catch it. I do feel like a lot of gays are open to catch[ing] it a lot easier than the average straight person. So, I do feel like me being gay I am more risky to catching it. – Joe, age 23

There appeared to be an acceptance by some that contracting HIV would be inevitable. One participant was asked about his risk for HIV and why he thought he had a high probability of future HIV infection. He not only stated that having sex with other black men put him at high risk, but that some black YMSM almost accepted this an inevitable future.

I mean, I’m a gay black guy. I have sex with predominantly other gay black guys. It’s definitely not inevitable, but it’s not impossible either. It’s just kind of statistically more likely I guess. I think I read somewhere where it’s like one in every 2, which scary…it’s just really more likely for us, so I feel like me and a lot of other black guys can sometimes feel like it’s almost inevitable. I know some people actually with the mentality like, ‘Oh, I might as well go ahead and get it because it’s going to happen regardless.’ Which is sad, but that’s what some people think.
– Sebastian, age 20

Another participant, expressing frustration about the constant HIV stigma, almost seemed resigned to the fact that people will always judge him because of the intersection of his race and sexual identity.

Oh, well, if they think I’m going to get HIV, I might as well just say I have it. You know, I think that people are under the influence of like, ‘Oh wow, that guy
is gay and black. That’s a red flag. Just his existence is a red flag. I’m going to stay away from that because I don’t want to become infected’… because of the intersection of my race and sexuality, which is perceived as also having a great increase for HIV. So, I think that that’s why it’s so frustrating. No matter what I do, people can still look at me and see the intersection of my identity, and not want to be with me, romantically or sexually. – Dove, age 19

Another participant echoed this sentiment, saying that this discrimination not only occurs with white YMSM but also comes from within the black community.

There is considerable amounts of discrimination against black, even by some black as well. Many only prefer Latin or light guys you know.
– Kaiser, age 22

A few other participants stated, based on their own experiences and perceptions, that they believed the stereotypes African American YMSM being lazy and hypersexual were true. This perception appeared to be internalized and shaped the way participants viewed the African American YMSM community.

I would say blacks are more…[have] a lack of concern about what is important as far as working and getting themselves together…mainly blacks fail to realize that they need to go get their education and go to work and do stuff…They would rather go out and be having sex with multiple people. It changed me, like the way I looked at gays or like HIV…Like that’s crazy. It made me look at like people differently.”
– Curly, age 18

It was also apparent that rumors centered around people’s sexuality and HIV status also shaped how participants viewed members of the African American YMSM community, especially if they were bisexual.

[It’s just] Kind of what people say. Just the fact that what you see in clubs, and even on the apps, like it’s, I don’t know… like, black guys, because you also have the ones who are down-low. – Shaggy, age 22

However, one participant not only internalized these stigmatizing and racist messaging but also seemed to use it to his advantage to navigate the dating world. He had a perception that his physical characteristics of lighter-skin and a larger penis fit a stereotype, which not only gave him some privileges in dating but also lowered his risk for HIV.
I also think that I have a degree of privilege as well. Many people who are white are fairly racist too, want to have sex [with me] due to penis, [my] big penis privilege, but also because I am of a lighter skin tone as well too. So, I am not subjected too much of that racism, even though it is still very present. So, I have a larger availability of partners as well; as a result, my likelihood of the contraction of HIV is lower. – Kaiser, age 22

“Kaiser” expressed a sentiment that several of the other participants discussed: having white sexual partners lowered his risk for HIV. Each participant interviewed acknowledged and talked about the high rates of HIV in both the African American and gay communities. However, for some of the participants, internalizing racist stereotypes and HIV stigma affected the way they perceived and evaluated potential partners who were African American males. These internalized messages also shaped how they viewed PrEP as a method of HIV-prevention, which is discussed in the next section.

3.3.3 Selection Bias for Sexual Partners

Partner vetting was described as the practice of deciding how "safe" a potential sexual partner was prior to initiating sex -- protected or unprotected. The vetting process included a complex social calculation that was based on perceptions of race and class.

3.3.3.1 Race-class bias - "I do a race class analysis to determine my partner's risk level."

Many of the participants described how the intersection of race and class influenced how they chose sexual partners when the potential partner was an African American male. Many expressed a preference to date outside their race. Some participants discussed how they analyzed a person’s racial and educational background, along with where they met men as a method to identify and screen out potentially high-risk sexual partners.

I definitely do like a weird race class analysis when I see them, I’m like, you’re a white dude on a college campus. You’re like a white college kid, so like you most likely do not have HIV. But if I’m like, you’re a black dude who is in (city), who I don’t know really anything about, you are much more likely to have HIV. But then I’m like, if you’re a black dude on a college campus, I probably don’t think you have HIV. So, I don’t really vet you the same way. So, like more, not necessarily just a race—it’s like a race/class, everything happens in like that split second. – Ruby, age 23
A second participant echoed this sentiment, stating that meeting men in the community, versus on campus, increased his risk for HIV, especially if the men were black.

…frequently I’ve thought about like, ‘Wow I could really catch this.’ And I think also just like when I’m starting to look at the statistics and read more articles about it, me, specifically as a gay black male in the (city) area there’s a very high rate of HIV/AIDS… I know that I have a high probability of catching it. And so, I think that that for me has [me] like, ‘Oh, am I safer to just have sexual relations with white guys than a black guy?’ – Dove, age 19

Some of the methods they used were reminiscent of the HIV stigma and racism they described experiencing themselves while dating and in everyday life. This assessment factored in not only race and class, but also social location. Social location is the assessment of a person’s place in society based on specific characteristics (e.g., race) (Floya, 2012). In this case, participants judged other African American YMSM’s risk based on their race, gender, sexual orientation, and socioeconomic status. Ironically, participants seemed aware they were employing racial bias and HIV stigma to screen other African American YMSM potentially discriminating against their own community.

You know, I feel myself having to like waiver the guys that I date, or like even like prejudging guys if I think that they look dirtier. Which is kind of a bad thing. I know it’s terrible! But like if a guy looks like he may hang around other people who could possibly have it, then I’m more negligent of having sexual relations with someone like that. I think if someone is wearing, like, clothes that are kind of hanging down, or they may even be dressed almost like a drag queenish type thing. But maybe not completely put together, sometimes those are like red flags for me. Like, "Is that person safe?" – Dove, age 19

This participant also discussed his perception of the role a person’s economic status played in their risk for HIV.

I know this is kind of bad too, but like people with like lower incomes might also possibly have a higher rate of HIV. And so like, figuring out like your financial status as well. Cause just like access to healthcare, and access to condoms or other things that could help you prevent HIV exist there too. So, like if I’m having sexual relations with someone who is African American and gay and from a low-income family, then I feel like that also makes my chances of catching it [HIV] go higher. – Dove, age 19
One participant openly discussed that he might be participating in "anti-black racism" by invoking these stereotypes in partner selection.

…it’s really, really strange way of thinking, the way that I do, but it makes me feel more inclined to vet black people when I engage in sexual practices. And I am just like, is this anti-black? Is this, like, racist that I am doing this? Or is this warranted because in the way in which anti-blackness has created a scenario in which it’s more likely for like black people to have HIV? So, like, am I doing good health practicing, or am I participating in anti-black racism right now. I can’t tell right now. And it’s really frustrating. And so, always thinking about that.
– Ruby, age 23

3.3.3.2 PrEP and sexual risk – “If I was on PrEP, I wouldn’t feel like I’d be so exposed.”

The majority of the participants believed that PrEP was a suitable method for HIV-prevention. Many of them expressed that they would feel more protected if they used PrEP as a method of prevention against HIV.

I mean it sounds great. I mean why not? Why wouldn’t you do it? I feel like not doing it as a gay man is crazy, now that this opportunity is here you know. And I would still wear protection and stuff, but to have that extra, you know. Why not?
– Bue Jay, age 18

This sentiment was echoed across participants, as they stated PrEP would be useful in decreasing their anxieties about dating within the African American YMSM community and would open up a wider dating pool for them allowing them to be less stringent in their selection process.

I’d probably feel a little more at ease in terms of dating. I feel like my dating pool might open more. – Dove, age 19

I definitely would be less anal about it if I’m on PrEP. I definitely think I would still use it [condoms] because I’m worried about other STDs. But if I was on PrEP, I would use it for a little bit, maybe, but it would be less of a fear there. – Sebastian, age 20

My vetting process might be a little bit less stringent... Yeah, I think I wouldn’t be as anxious anymore. – Ruby, age 23
3.3.4 Internalizing Negative Messages and PrEP Uptake

The participants' experiences with racism and HIV stigma had a direct impact on their ability or willingness to access PrEP in the clinical setting. All of the participants stated that they believed that PrEP was a useful method to decrease rates of HIV. However, some participants also expressed apprehension when discussing if they would ask for PrEP during a future clinical visit. They feared clinicians would judge their request for PrEP because of their same-sex desires.

I've never told him that, you know, I'm gay or my sexual history. I don't know, I'm just, just kinda nervous to tell them about him about it. I guess just being nervous, 'cuz...I don't really know that much about it, from what I've seen, like, just the idea of guys on PrEP are really sexually, you know, risky. Like, just out—like, so...I don't know, I'd just be nervous, like, to just ask about it, 'cuz I feel like that would make them think a certain way about me if that makes sense.

– Shaggy, age 22

Another participant stated that he would be wary of taking a prescription for PrEP from a clinician as he would not be sure of the clinician’s underlying motivations.

Yeah it’s a little vague, and I could take that as like a racial thing. Like hey, you’re black and gay – let me help you protect yourself from HIV.

– Garrett, age 24

One participant stated that many people in the African American YMSM community associated PrEP with HIV. This association caused some people to turn a deaf ear or avoid contact with health providers or community educators who tried to talk about PrEP.

They hear you have HIV. Or you might have it. Or you might be in contact with somebody. It’s just kind of like a red flag… – Max, age 24

3.4 Discussion

The findings from this study highlighted several important themes related to sexual racism, as a type of racism (Bedi, 2015), discrimination and stigma, selection bias for sexual partners, and internalization of negative messages and future PrEP use.
Participants discussed experiencing sexual racism when trying to date outside their race due to their skin color. Several of the participants explicitly stated trying to date white YMSM, only to be told they were not desired due to their skin color. Some of the participants were distressed by this form of overt discrimination, believing that their skin color should not be the determining factor for partner selection. Sexual racism has been reported in other studies, where participants have reported experiencing stigmatizing, discriminatory, and overtly racist comments because of the color of their skin (Callander, Newman, & Holt, 2015; Denton et al., 2015; J. White et al., 2014). Racial preference is common in dating, particularly with online dating, with African Americans more likely to choose other African Americans, with themselves sometimes at the bottom of the dating hierarchy (G. Phillips et al., 2016; J. White et al., 2014). There has been discourse in a dating world that sexual preference by race is not indeed racism, equating it to preference for other physical characteristics such as height and weight (Callander et al., 2015). White YMSM’s choice not to date African American YMSM may be due to overt racism (Bonilla-Silva & Forman, 2000) or the perception of higher risk for HIV in the African American community (Voisin et al., 2013), or both. The participants who talked in-depth about sexual racism either currently or previously attended elite predominantly white universities, which may have been a factor in the participant’s experiences. A study by Bonilla-Silva and Forman (2000) reported that white college students at predominately white institutions held negative or racist beliefs about minorities, despite reporting to believe in multiculturalism and color-blindness.

All the participants acknowledged the high rate of HIV in the African American YMSM community. This acknowledgement of HIV rates contributed to their own increased perception of risk and anxiety concerning their risk of HIV. This perception prompted many of the participants to view other African American YMSM as a greater risk factor for HIV, compared to their white counterparts. Several studies have reported that African American YMSM are keenly aware of rates of HIV in the African American community, shaping their patterns of dating (Millett,
Jeffries, et al., 2012; Nanin et al., 2009; Newcomb & Mustanski, 2012; Rowan et al., 2014). The increased perception of HIV risk influenced some of the study participants to prefer white YMSM, believing this would widen their sexual networks and lower their risk for HIV infection. This was an interesting finding, as it appeared that some African American YMSM were using racial discrimination to date outside of their race to lower their sexual risk. To date, similar findings have not been reported in the literature.

Despite expressing an awareness of the negative stereotyping and HIV stigma associated with African American YMSM and HIV, several participants expressed the need to “vet” their African American sexual partners even more than their non-African American partners. The need to vet sexual partners was even greater when participants compared YMSM in the community versus YMSM on college campuses. They perceived that YMSM, mainly African-American YMSM in the community had a higher risk of being HIV-infected, versus African-American or white YMSM on college campuses. This belief is consistent with white college students who tend to underestimate or believe that they are not at risk for HIV, leading to a false sense of security (Haile, Kingori, Darlington, Basta, & Chavan, 2017; Shiferaw et al., 2014).

Participants’ vetting processes were based on a complex calculation of race and class based on internalized negative messaging about the African American community (Scott, 2003). Meeting potential sexual partners who were African American and from the “community” invoked a mental model of heightened HIV risk (Argyris, 1976). Stereotypes around the intersections of race, gender, sexual orientation, and class prompted the participants to quickly act on the belief that young African American men from the community who appeared poor and undereducated were more likely to have HIV. Participants use of stereotypes to triage perceived danger in their environment may be a coping mechanism to “protect” them against HIV (Stangor, 2009). However, using stereotypes as a foundation for calculating HIV may be flawed and leave African American YMSM at higher risk for HIV (Albert et al., 2013; Weinstein, 1989).
Some participants made derogatory comments about the African American YMSM community regarding sexual behaviors in order to distinguish themselves from that community. This “othering” is often seen when people internalize negative and discriminatory beliefs about their group/community, but try to distance themselves cognitively and socially (Balibar, 2005). This “othering” technique appeared to be used by the participants because of internalized homophobia (Eguchi, 2006) and HIV stigma (Boone, Cook, & Wilson, 2016). This caused them to view the African American YMSM community negatively (Eguchi, 2006), disassociating themselves (Choi, Han, Paul, & Ayala, 2011; I. Meyer, 2003); trying to identify with the dominant culture (Eguchi, 2006; I. H. Meyer, 1995). An “othering” strategy can lower an African American YMSM's perception of risk for HIV, as they are less likely to associate themselves with behaviors of African American YMSM seen as socially “unacceptable” by the dominant culture, and avoiding community events where HIV-prevention messages would be most prevalent (Maulsby et al., 2014; Pyun et al., 2014). One participant did appear to internalize the racialized messaging around African American male sexuality. He stated that in the dating arena, he benefited from “big penis privilege” and a lighter skin tone citing that these characteristics made him more desirable to white YMSM — more so than his darker-skinned peers. His perception was based on his acceptance of white YMSM’s racializing his sexuality (Teunis, 2007). This participant seemed to have internalize the negative messaging and stereotyping about darker complexed African Americans seeing his skin tone, not only as an external indication of his mixed ancestry, but as a physical indication that he should be viewed as a “different kind of black” (Sánchez, Liu, Leathers, Goins, & Vilain, 2011).

Overall, all the participants reported that they viewed PrEP as a great option to reduce their risk for HIV. However, their motivations for potentially using PrEP were varied. Some participants wanted to reduce their overall risk with all sexual partners. Others, given their experiences with sexual racism limiting their ability to date outside of their race (Callander et al.,
2015), and the fact that African American YMSM are more likely to have African American YMSM as sexual partners (Newcomb & Mustanski, 2012), wanted PrEP as way to decrease their risk for HIV. Participants also noted that PrEP would allow them to loosen their standards of vetting as they would feel more protected while on PrEP (Corneli et al., 2015).

However, for some participants, experiences with racism and HIV stigma in the community made them less willing to initiate a conversation about PrEP in the clinical setting, for fear of judgment from their health providers. Additionally, some participants expressed hesitation with taking a prescription for PrEP from their healthcare providers. They were concerned the prescription would not be based on their sexual risk, but because they were African American YMSM (Hammond et al., 2010; Maulsby et al., 2014).

### 3.4.1 Limitations

As with all research, this study has limitations. Participants were recruited from several metropolitan areas throughout North Carolina and Maryland, two states with different political social, and economic environments. The sample recruited from these locations were not equal, with 19 participants interviewed in North Carolina and six participants from Maryland and Washington, D.C. Additionally, participants were recruited from online applications (Facebook, dating applications) and a community organization that primarily served African American MSM and transgender women. Participants who were recruited from these locations may have been inherently different from participants who were recruited by friends or recruited from community events. Also, the participant interviews were conducted at a single point in time and their insights and experiences likely changed over time. Nevertheless, the goal of the study was not to provide a representative sample, but to gain a deeper understanding of the facilitators and barriers to African American YMSM use of PrEP. The diversity of responses from this sample provided a range of rich descriptions (Margarete Sandelowski, 2000) to describe what factors would affect
PrEP uptake. The participants in this study were also highly educated, with 44% ($n = 11$) reported taking some college classes and 32% ($n = 8$) having completed college or technical school.

### 3.4.2 Research and Clinical Implications

This study provided evidence that cultural and societal factors, both external and internal, affect African American YMSM’s potential future use of PrEP. Several of the study participants stated they would be reluctant to ask about PrEP, disclose their sexual orientation, or take a prescription for PrEP for fear the provider might make assumptions about their sexual behaviors. Researchers and healthcare providers need to have a better understanding of how societal racism and HIV stigma (Herron, 2016) can potentially influence the interactions between African American YMSM and healthcare providers, and their willingness to access HIV-prevention services, namely PrEP (Cahill et al., 2017).

Research needs to be focused on the clinical needs of African American YMSM in regards to PrEP. Consistent with other research, the participants in this study were willing to use PrEP to decrease their risk for HIV (Cohen et al., 2015; Ojikutu et al., 2018). However, participants in this study were also not sure if they would feel comfortable asking a healthcare provider about PrEP in a future clinical visit. They also stated members of the African American MSM community often turn a deaf ear when they hear PrEP secondary to HIV stigma. Research needs to be conducted to develop clinical and HIV/PrEP prevention programs to address these potential barriers to PrEP use in African American YMSM. However, to have the highest clinical impact and cultural relevance, this research should be developed with and informed by African American YMSM (Galindo et al., 2012; Wade Taylor et al., 2014; Washington, D’Anna, Meyer-Adams, & Malotte, 2015).

The effects of racism and HIV stigma on African American YMSM’s health outcomes is a public health concern (Jee-Lyn Garcia & Sharif, 2015). Experiences with racism and HIV
stigma in the community can modify African American YMSM’s personal beliefs, attitudes, and behaviors regarding their risk for HIV (Balaji et al., 2012; Ma, 2012). African American YMSM may employ negative coping strategies (e.g., condomless sex) in response to experiences with racism and HIV stigma in the community (Han et al., 2015). Healthcare providers (nurse practitioners, physicians, and physician assistants) need to be educated to understand, recognize, and address these individual-, community-, and society-level factors that can put African American YMSM at higher risk for HIV (Zakaria, Johnson, Hayashi, & Christmas, 2015). Health professional programs need to incorporate historical context and a social justice lens in their educational curricula to gain a fuller understanding of the role an oppressive environment plays in the health outcomes of African American YMSM (Brody, Yu, Miller, & Chen, 2015; Chae et al., 2014; Jee-Lyn Garcia & Sharif, 2015).

### 3.4.3 Conclusions

The findings of this study provided evidence that experiences with racism and HIV stigma in a community shape African American perception of risk for HIV, which could influence their intentions and motivations for future use PrEP as a tool for HIV-prevention. The study provided insights into how African American YMSM calculate their own HIV risk, the risk of their sexual networks, and the methods they use to decrease this risk. The study also provided some of the first evidence of how community-level factors impact African American YMSM’s potential future use of PrEP.

### 3.4.4 Key Considerations

- Healthcare providers should be prepared to initiate sensitive and informed conversations about PrEP with African American YMSM. African American YMSM may be apprehensive about initiating conversations about PrEP after experiencing racism and HIV stigma in the community.
Community and campus prevention education programs should take into consideration the effects of race, class, sexual orientation when educating African-American about their risk for HIV. Historical factors, such as racial stereotypes, may serve as a barrier to African American YMSM'S uptake of HIV-prevention messages.
4. Young African-American/Black Men Who Have Sex with Men and Their Perceptions of the Healthcare System

4.1 Introduction

In 2010, Grant et al. (2010) published the results of the Preexposure Prophylaxis Initiative study (iPrEx), which documented the efficacy of using once daily oral coformulated tenofovir disoproxil fumarate and emtricitabine [FTC/TDF] PrEP for pre-exposure prophylaxis (PrEP) in men who have sex with men. The iPrEx study demonstrated that PrEP can reduce HIV transmission between male partners by up to 44% with daily dosing (Grant et al., 2010). In December of 2011, Gilead sought approval from the FDA for the use of [FTC/TDF] PrEP as the first drug to prevent HIV transmission in adults (Leuty, 2011). Despite not having FDA approval of [FTC/TDF] PrEP or PrEP for HIV-prevention, the Centers for Disease Control and Prevention (CDC) issued interim guidelines for PrEP for use by men who have sex with men (MSM) (Centers for Disease Control and Prevention, 2012). The interim guidance was developed ahead of FDA approval to prevent misuse of HIV anti-retrovirals (ARTs) for prevention purposes once the announcement was made (Prevention, 2011).

In July 2012, the FDA approved the first drug for HIV-prevention, PrEP (2012). This was a ground-breaking development in HIV-prevention, but this also created new dilemmas for the HIV prevention. Gilead’s decision to seek FDA approval was coupled with the decision not to advertise PrEP, so as not to diminish existing HIV-prevention messages of safer sex (Leuty, 2011). There were fears in the healthcare community that, for persons taking PrEP, it would promote sexual promiscuity, decrease condom use (Holmes, 2012; Rowniak & Portillo, 2013),

1 This study was funded in part by the 2016-2017 C. Everett Koop HIV/AIDS Research Grant, Indiana University, Rural Center for AIDS/STD Prevention; and the Anne Zimmerman, RN, FAAN Endowment, American Nurses Foundation.
and increase viral resistance (Holmes, 2012; Rowniak & Portillo, 2013; Wood, 2012). Another concern was the cost for PrEP for patients estimated as an annual cost of upwards of $12,000 (Holmes, 2012). Healthcare providers were apprehensive about the ability of existing models of care to support PrEP roll out (Holmes, 2012; Rowniak & Portillo, 2013). Nevertheless, the interim CDC (2011) guidelines for PrEP required healthcare provider to perform routine HIV and sexually transmitted infections (STI) monitoring, PrEP adherence counseling, and risk-reduction counseling every three months. As such, healthcare providers’ had well-founded concerns regarding the burden of monitoring and adherence on their patients (Doblecki-Lewis & Jones, 2016; Mullins et al., 2015) and staff (Doblecki-Lewis & Jones, 2016).

In 2014, the CDC followed up by issuing the most recent PrEP guidance that covered all populations at high risk for HIV and details about the clinical management of patients taking PrEP (U.S. Public Health Service, 2014). Since then, there have been numerous studies documenting the rollout and advancements for PrEP as an HIV-prevention method (Molina et al., 2015; Volk et al., 2015). The same year, the three-year San Francisco demonstration project observed no new HIV infections in the 657 people who initiated daily PrEP (Volk et al., 2015).

However, despite these major advancements, the adoption of PrEP by African American MSM has been slow (Eaton, Driffin, et al., 2015). To date, nearly 80,000 people have been prescribed PrEP, with men accounting for 74.6% of [FTC/TDF] PrEP prescriptions (Mera McCallister et al., 2016). However, in comparison to whites, African Americans utilize PrEP at a much lower, or declining rate. In 2014 and 2015, 62% and 74% of people using PrEP were white, while African Americans only comprised 12% and 10% of users, respectively (Bush et al., 2016). This data suggests that while PrEP use in whites is steadily increasing, it is declining for African Americans. This is particularly true for African American MSM who are less likely to know about (Eaton, Driffin, et al., 2015; H. L. King et al., 2014) or take a prescription for PrEP (H. L. King et al., 2014).
The slow uptake of PrEP in African American MSM is concerning, considering the disproportionate rate of new cases of HIV within the African American community, especially among African American MSM. African American MSM have the highest incidence and rate of increase of new cases of HIV infection as compared to all other racial/ethnic groups (Centers for Disease Control and Prevention, 2017). In 2016 alone, African American MSM represented 66% of new HIV infections in the general population with African American young men who have sex with men (YMSM), aged 13-24, accounting for nearly 21% of these new infections (Centers for Disease Control and Prevention, 2017). Therefore, it is imperative to understand what factors contribute to the potential use of PrEP in African American YMSM.

4.1.1 Disparities in Health Care Access and Health Outcomes

Historically, African American YMSM have had inadequate access to health services (McKirnan et al., 2013), including for HIV-prevention services (Hussen et al., 2013). Young African American MSM are less likely to be insured, more likely to live at or below the U.S. federal poverty line, and have to travel further for medical care than white males (Adams et al., 2013). These barriers to care can lead to later diagnoses of chronic illness (Millett et al., 2011; Oster et al., 2011), delayed treatment, and poorer health outcomes (Talcott et al., 2007; Ulett et al., 2009).

Men who identify as gay, bisexual, or engage in same-sex behaviors often have difficulty getting their healthcare needs addressed. Bias against same-sex behaviors in the healthcare setting is deeply rooted in a heteronormative framework that labels homosexuality as an "abnormal" behavior (Santos et al., 2013). Such beliefs have historically influenced medical training programs, healthcare policies, and health institutions' practices, thereby affecting how healthcare providers deliver care to men who engage in same-sex behaviors (Herek, Chopp, & Strohl, 2007; Wolitski & Fenton, 2011).
Identifying as either an African American male or as an MSM has been historically associated with higher rates of discrimination (C. M. Burton, Marshal, Chisolm, Sucato, & Friedman, 2013; Choi et al., 2011; Follins, Walker, & Lewis, 2014; Herrick et al., 2013), inadequate access to healthcare (Calabrese et al., 2014; DeSantis, Naishadham, & Jemal, 2013; N. R. A. Palmer et al., 2013), and poorer health outcomes (Millett, Jeffries, et al., 2012; Traeger, O’Cleirigh, Skeer, Mayer, & Safren, 2012; Xanthos, Treadwell, & Holden, 2010) than the general population, thereby increasing health disparities for persons who self-identify with either group. Joint membership in these social identities, or identifying as an African American MSM, multiplies the effects of these determinants of health; this creates an even greater health disparity, which is evidenced by the continuous rise in new HIV infections for African American MSM (Millett et al., 2007; Millett, Jeffries, et al., 2012; Millett, Peterson, et al., 2012; van Griensven & Stall, 2014). This disparity is even more evident in African American YMSM.

Given the rate of new HIV infections for African American YMSM, and the availability of PrEP, it is imperative to understand the reasons for the poor uptake of PrEP in African American YMSM. The aims of this study are to 1) explore African American YMSM's experiences seeking HIV-prevention and sexual health services in the healthcare system, and 2) analyze how African American YMSM's experience in the health system influence their likelihood in the future to use PrEP.

### 4.1.2 Study Design and Setting

This study used an exploratory, naturalistic qualitative design to explore factors that influenced African American YMSM’s likelihood of future PrEP as an HIV-prevention method. The participants were recruited from the Triad, Triangle, Charlotte metropolitan areas of North Carolina and the Baltimore-Washington Metropolitan area of Maryland. Similar to African American YMSM nationally, African American YMSM in North Carolina and Maryland share a
disproportionate burden of HIV. North Carolina is part of the Deep South, a region that has the highest rates of HIV in the nation, particularly for African American MSM (Reif et al., 2017). In 2016, African American MSM of all ages comprised 69.3% of new HIV infections for MSM in North Carolina. The Baltimore-Washington area also has a high rate of HIV transmission. In 2016, African American MSM accounted for 63.5% of new HIV infections in MSM in Maryland (Maryland Department of Health, 2017), and 57% in Washington, D.C. (District of Columbia Department of Health HIV/AIDS STD, 2017).

4.1.3 Participants and Recruitment

The participants were recruited using a mix of purposive and snowball sampling. In order to be eligible for the study, participants had to 1) be between the ages of 16-24; 2) self-identify as African-American, black, or mixed race including African American or black; 3) have been assigned male sex at birth; 4) self-identify as gay, bisexual, or queer, or self-identify as a heterosexual male who has had a past voluntary sexual experience with another man or currently have sexual desires for men; 5) report being uninfected with HIV; 6) be mentally capable of providing informed consent; 7) be able to speak and read English; and 8) not currently using PrEP. Men living with HIV were excluded, as this study was focused on the prevention of HIV transmission.

Recruitment activities began June 2016 and ended December 2016 when data redundancy was noted. Recruitment activities used a mix of online and smartphone applications, in-person community and clinical engagement, and the use of respondent-driven sampling. IRB approval was obtained prior to the initiation of any study procedures and only approved flyers and media (hand cards, online advertisements) were used to promote the study with each of these methods.
4.1.4 Data Collection

The participants signed a written informed consent prior to conducting the individual interviews. Data were collected via an investigator-developed semi-structured interview guide. A short description of PrEP was read to participants to be used as an elicitation device. This description included the efficacy of PrEP and requirements clinical follow-up while on PrEP. The privacy and identity of participants were protected by using an alias chosen by the participant prior to the start of the interview. Each participant was given a $25.00 Visa gift card to thank them for their time. The interviews were digitally recorded and later transcribed.

4.1.5 Data Analysis

The audio files for the qualitative interviews were transcribed verbatim by a vetted transcriptionist. The transcripts were then proofed by the primary researcher against the audio files for accuracy, then read in their entirety. The qualitative interview was subsequently analyzed using NVivo 11 software (International, 2017) using directed content analysis (Hsieh & Shannon, 2005). First cycle coding consisted of in vivo and descriptive codes to capture participants experiences and thoughts related to their experiences seeking healthcare and conversations with providers about sexual health. (Miles et al., 2013; Saldaña, 2012). Analytic memos were created for each interview to capture in-depth thoughts about the interview, analysis process, and emerging themes (Miles et al., 2013; Saldaña, 2012).

The second level coding consisted of pattern coding, where the codes were collapsed into smaller categories. Preliminary codes were used to form themes based on frequency, the similarity of core concepts and marked differences between participants’ responses (Granger, Sandelowski, Tahshjain, Swedberg, & Ekman, 2009; Saldaña, 2012). The codes were sorted using semantic relationships to organize codes based on participants’ descriptions of their
experiences with accessing healthcare services, interactions with healthcare providers, and their impact on participants’ willingness to use PrEP (Miles et al., 2014; Saldaña, 2012).

Descriptive statistics were used to summarize demographic data of the participants. SAS Version 9.3 was used to provide descriptive statistics for the study.
4.2 Results

The final sample resulted in 25 self-identified HIV-negative African American/Black YMSM, aged 18-24 (M = 21.0, SD = 2.0). All participants identified as African American. However, 52% (n = 13) of the sample also selected additional racial or ethnic identities; Caucasian or white 8% (n = 2); Asian or Pacific Islander 4% (n = 1); Native American or Alaskan Native 8% (n = 2); Latino or Hispanic 8% (n = 2); or Multi- or Bi-Racial 24% (n = 6). One hundred percent of the men were born male at birth, and all but one identified as “male”; the one exception identified as “gender-nonconforming.” This participant was still included in the sample as this participant was socialized and treated as a male since birth, and therefore subjected to similar life experiences as other participants who identified as male. Seventy-six percent (n = 19) of the men identified as gay. Thirty-two percent (n = 8) of the sample had completed college or technical school and 24% (n = 6) had completed high school or GED. The majority of participants were recruited from community sites or referrals (48%) and online and social media sites (28%). The majority of the sample (72%) had some form of health insurance. When asked if they had ever taken PrEP only 4% (n = 1) responded they had ever taken PrEP, with 24% (n = 6) stating that they had been recommended PrEP by a doctor or nurse. When asked if they would take a prescription for PrEP from a health provider 44% (n = 11) responded “yes” and 32% (n = 8) responded “no.” (See Table 3 for demographics)
## Table 4. Individual Characteristics – Self-report

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<th>n (%)</th>
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<tr>
<td><strong>Age (M= 21.0; SD = 2.0)</strong></td>
<td></td>
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<tr>
<td>18 -24</td>
<td>25 (100.00)</td>
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<tr>
<td><strong>Racial/ethnic identity</strong>*</td>
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<tr>
<td>African American/Black</td>
<td>25 (100.00)</td>
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<tr>
<td>Caucasian/White</td>
<td>2 (8.00)</td>
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<tr>
<td>Asian or Pacific Islander</td>
<td>1 (4.00)</td>
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<tr>
<td>Native American or Alaskan Native</td>
<td>2 (8.00)</td>
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<tr>
<td>Multi- or Bi-Racial</td>
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</tr>
<tr>
<td>Other</td>
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</tr>
<tr>
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<tr>
<td><strong>Gender identity</strong></td>
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<td>24 (96.00)</td>
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<tr>
<td>Gender Queer/</td>
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<tr>
<td>Gender Non-conforming</td>
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<tr>
<td>Individual coverage (Affordable Care Act)</td>
<td>-----</td>
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<tr>
<td>Don’t know</td>
<td>3 (12.00)</td>
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**Experiences with PrEP**

| Ever or are you currently taking Truvada (PrEP) | n (%) |
| No | 24 (96.00) |
| Yes | 1 (4.00) |

**Provider suggested PrEP**

| | n (%) |
| No | 18 (72.00) |
| Yes | 6 (24.00) |
| Not sure | 1 (4.00) |

**Would take a prescription of PrEP from provider**

| | n (%) |
| No | 8 (32.00) |
| Yes | 11 (44.00) |
| Not sure | 6 (24.00) |

*Self-reported racial or ethnic identity*
The interviews lasted, on average, 60 minutes, but ranged from 35 minutes to 1 hour and 24 minutes. These interviews captured participants' experiences and opinions regarding their experiences seeking healthcare and discussions with healthcare providers about PrEP. The 10-minute demographic survey captured individual characteristics and social and behavioral factors that might influence African American YMSM's use of PrEP.

All 25 of the participants had some interaction with the healthcare system for sexual health and/or HIV-prevention services. Each of the participants described the reason for seeking health services, the process of accessing care, and their experiences once in the healthcare setting. The description of their engagement in the healthcare system covered both facilitators and barriers to accessing comprehensive sexual healthcare, which, in turn, directly affected their ability or willingness to utilize PrEP as a prevention method. The data also highlighted individual characteristics — socio-economic status, sexual orientation, and family dynamics — that affected when and how African American YMSM engaged in the healthcare system.

4.2.1 Facilitators to Accessing Care

The participants described the different factors that allowed them to access preventative health services. Facilitators included knowledge of health facilities, adequate finances, and support from familial networks. They also described how these positive experiences in the healthcare setting motivated them to return for future services.

4.2.1.1 Ease of access – “I’ve never really had a problem or issue getting to the doctor’s appointment.”

A few of the participants described that having access to a vehicle and living near a health center made seeking health services easier. One participant’s permanent residence was in Maryland, but he was enrolled in college in North Carolina. Despite retaining his primary care in his home state, he found it easier and more convenient to access preventative health services in his home state of Maryland.
I drive my own car. And so it’s not like it’s really far away from my home. Umm and so I’ve never really had a problem or issue getting to the doctor’s appointment. – Dove, age 19

Even though some of the participants mentioned they had no problems scheduling an appointment with a physician, there was a preference for walk-in appointments.

If I have to make an appointment, I just call and like, ‘Hey, I need to make an appointment.’ But I rather just go into the clinic and just to walk in. I will walk in quick as heck. – Nick, age 20

4.2.1.2 Facility type – “I haven’t been to the doctor, but I’ve been to the health department”

While some of the participants had not recently sought primary care services, they mentioned they had been to the health department for prevention services. In fact, 8 (32%) of the study sample had visited the health department for some type of preventative service. When asked where they typically preferred to get HIV testing, most of the participants stated the health department or a community testing site.

I do testing at the LGBT center here and they’re fantastic. They are fantastic. They are non-judgmental and it’s a very nice environment. I wouldn’t want to go to a larger hospital… – Kaiser, age 22

The last couple of times it has been at the health clinic. I just to go get tested and everything. I haven’t seen my doctor in a while, mostly like a health clinic…the last time I saw my regular doctor was, like probably over a year ago. – Shaggy, age 22

4.2.1.3 Provider/clinic interactions – “She was fantastic, luckily, she was fantastic”

Several of the participants discussed the qualities of the healthcare providers and what made the participants comfortable in the clinical setting. One participant described talking to a male provider who identified as gay and was open about his own life experiences during his first HIV test. The participant was nervous during the encounter. However, the clinician’s self-disclosure was perceived as helpful and comforting to him, as he could relate to the provider. This similarity presumably made for a better experience in the clinical setting, easing some of his anxiety.
Like I just think it was a scary experience the first time because, for someone who have never been tested before, when you ask to go and get tested, you just don't know what type of people you are dealing with, if they are gonna judge you or how they act towards you...when I first went and got tested like, it was from a gay man and he was more relatable and he actually sat me down and talked to me and call[ed] me and let me know that it's typically, there's a lot of people that go through stuff and I am not the only person going through the situation, it's not just me. – T.T., age 18

When asked specifically what made him most comfortable, he stated that the clinician disclosing his sexuality and own experiences made him more comfortable.

I would say the fact that he was gay. I feel like we had more to relate to and we can actually sit there and laugh about a situation instead of him looking at me more judgment to... and when he asked me questions about me being with men and I felt like actually say, ‘cause you been with men too. So it's, like less judgment. – T.T., age 18

Another participant talked about the racial identities of the providers and how that made him feel a sense of familiarity when going for clinical visits, which made them more comfortable.

Very nice, very nice, friendly. It’s an African American staff and doctors, and so I usually feel very comfortable. They make it feel homey. – Dove, age 19

…one of the doctors – the clinic I go to, most of the nurses are of color. And I do like that. I feel more comfortable, I guess you could say. And one of the doctors is of color. And that’s the one I usually try to go to. – Acron, age 21

One participant described how the use of peer navigators made the clinic appointment more appealing and put him at ease allowing him to be more comfortable to ask questions.

…the ones that I’ve been going to, they use peer navigators, so it’s inviting. Okay, peer navigators they used between, let’s say 18 to 24 [years old], and they’re used as a middle person between all that [health] education and then the public. So, basically they can filter out the big words, and just give you straight the basic in layman's terms that way. It’s useful, and you know I enjoy that more than just going in and it's like everybody's dry like they don't want to be there. – Garrett, age 24

4.2.1.4 Familiarity with provider - “I’ve had the same doctor my entire life.”

Several of the young men described having the same primary care providers for most their lives. They had a sense of familiarity with the medical provider and facility.
I’ve gone to the same two or three doctors my entire life. But um…I’m not exclusive to them. I could go to any doctor. You know I’ve gone there and then they’re not there, I see somebody else. – Ryan, age 19

The experiences with the healthcare provider, the length of the relationship, and the quality of the interactions with the provider gave the participants a sense of ease and comfort when returning to the provider for care.

Umm, I have been going to my doctor since I was 4, to be honest. So, I had the same doctor, me and my mom have the same doctor. Yeah, ‘cause we go to the same clinic. Yeah, we have a really close relationship with her. I guess ‘cause my mom has this established relationship with her. And just knowing that the doctor wants to see me be healthy and make sure that I am on the right track in life, that’s what makes me really super comfortable. And if you don’t feel that way towards your doctor you need to find a new one, to be honest. – Nick, age 20

Ease of access, facility type, provider interaction, providers who shared characteristics, and familiarity with providers all served as facilitators to the participants accessing and returning to health facilities for care. They felt welcomed and able to be heard during their clinical interactions, which encouraged them to seek future care.

4.2.2 Barriers to Accessing Care

Some of the factors identified as facilitators to the participants accessing healthcare services were actually seen as barriers by other participants. Furthermore, there were additional factors, such as affordability of care, created a barrier to participants accessing preventative health services, which in turn, led to a delay or an inability to receive prevention services they desired.

4.2.2.1 Access – “It took so fucking long to get tested.”

Participants detailed the difficulty in accessing HIV testing services and making clinical appointments. Many encountered a series of barriers, (scheduling time, location, clinic hours, etc.) that blocked them from accessing clinical services, and ultimately, learn about PrEP.
It's obviously beneficial for me, but it's just getting there in time. There was one time, I remember they were doing, some center, I forgot where it was, they were doing like $50 gift cards for the first 50 people who got there. And like, I made it to the station, but I made it to one station and it was like 10 minutes for [train] one transfer for me, and I was like, ‘I'm not going to get lost and I went back. – Cheese, age 21

This difficulty of trying to get a clinical appointment seemed to frustrate one participant in particular. The primary source of his frustration was that he had to take the day off work to get tested.

…I am gonna wait until I have a day, I’m gonna leave work one day, cuz’ I just already work like 37 hours…I kept trying to find clinics that were open past work hours. So, there are like a bunch of random clinics in (city) that do stay open [late], luckily. But, like, every time I tried to go to them they weren't there, they were closed, or they moved locations. I tried to get in contact with them, and their phone service was done, and then I was like, this is fucking ridiculous. – Ruby, age 23

This participant was finally able to get an HIV test. But he only became more frustrated once he learned how much more legwork he needed to be complete on his part to obtain PrEP.

And so, I can’t get on PrEP because I can’t take the time off work to go get tested or what have you. Because, in order to get on PrEP with the way that she told me, I would have to make an appointment, they have to do a health screening, to make sure I guess that you don’t have HIV, then get on it, and make another appointment, I think, and then the follow up appointments every 3 months. I'm just like, that's a lot of work for someone who needs to be at work. That's like a lot of work for someone who needs to be at work. – Ruby, age 23

4.2.2.2 Confidentiality – “Even though the health department is free, a lot of black males do not want to go there.”

In the previous section, nearly a third of the participants stated they preferred to receive care at the health department, rather than primary care. However, one participant stated that some African American males avoid the health department; they worry about confidentiality in the waiting room and other areas of the clinic, as other members of the community also go to the same health department for care.

Even though the Health Department is free, a lot of black males do not want to go there. [The] Health Department is something that is open for the community, you know to go in there and sit down and wait for them to call your name it is
definitely embarrassing to certain people. I think that’s one of the reasons why maybe not enough people are using it, or not enough people know about it. – Duke, age 24

4.2.2.3 Lack of autonomy – “Going to the doctor on my own has been very limited or few”

Many of the participants discussed their mothers picking out their primary healthcare providers for them. For some, this is the same primary care provider who also saw other members of the family, including the mother. Because of the mother’s level of involvement in their care, and the participants’ young age, some of the participants recalled never being alone during clinical appointments, as their mothers were often in the room. These interactions often barred participants from openly discussing matters relating to their sexuality with health providers.

My mom has always been in the room. So, it's like my doctor has never been like, to a 14-year-old boy with his mom right there, like are you gay, straight? You know they just assume straight. And I've only been to one doctor's appointment without my mom because I kind of just turned 18. And uh no he didn't ask. – Blue Jay, age 18

The mother in the room during clinical appointment impeded the ability of the participants to develop the skills to advocate and ask questions on their own in the clinical environment.

In the past, it was mostly me just sitting there with my mom, telling them what was going on. So, going to the doctor on my own has been very limited or few. I think since I left home about two years ago, I went to the doctor twice. Once or twice. But one was like a check-up or a physical, but I'm still not used to telling them about myself. – Cheese, age 21

I mean sometimes it was embarrassing because my mother was there. I was like, ‘Uhh I don't want to disclose that in front of you just yet.’ But that's like a normal thing. Nobody wants to tell their mother in the hospital, ‘Yeah we were having sex!’ Yeah, so, all in all, it's been good. It's been real, like if they have to tell me something, then it would be like, ‘Can you leave the room?’ Or we would have a personal conversation. And then we're provided condoms at the end. – Jay, age 18
4.2.2.4 Transitioning care – "I don't have a primary care physician."

Once they left a pediatric care practice, many of the participants did not seek routine preventive care but mostly relied on the health department for STI and HIV testing. They did not have a sense of urgency for primary care, only seeking clinical services when sick.

I don’t have like a doctor yet, because like I just turned 18. So, like I wouldn't be going to the pediatrics one anymore. The last one I'd been to was like 5 or 6 years ago when I was a child. Now that I'm 18, I haven't been to that new my doctor yet. I haven't gone to him yet. Cause I haven't had a need to. I mean I should for a checkup and like just to get to know my doctor, you know. [laughs] But I haven't yet. – Blue Jay, age 18

4.2.2.5 Financial barriers – “I just haven’t been able to afford to.”

Despite the desire to access services, some of the participants could not access needed preventative health services because they were underinsured or not insured. Given their lack of knowledge of how to navigate the healthcare system, some participants did not know where to obtain low-cost or free primary care.

As of right now, no [I don’t have a doctor]. Because I don’t have insurance, and the places that I had just went to, they wouldn’t serve me because I didn’t have any insurance. – Red, age 21

Parental involvement, while a facilitator to accessing care, served as a barrier to these participants in navigating the healthcare system. Several of the participants mentioned that their mothers were in the examination room with them, preventing them from fully opening up and discussing sexual matters with their healthcare providers. This level of parental involvement also seemed to inhibit the participants' ability to advocate and speak for themselves concerning their sexual health. Additionally, while parental involvement did facilitate finding a healthcare provider initially when it was time for participants to transition to adult care, they had to find health providers, which subsequently led to a delay in their accessing care as adults.
4.2.3 Experiences with HealthCare Providers

The participants had a wide range of experiences with healthcare providers in the clinical setting. The participants described their conversations, their perceptions of the health providers themselves, and how this affected participants' level of involvement in their clinical care. The participants described these experiences as both positive and negative, as these interactions shaped their ability to fully engage in the healthcare system. These interactions with health providers in the healthcare setting are critical, as they are part of the pathway for YMSM to access PrEP.

4.2.3.1 Conversations with providers about sexual health - “She knew to ask the appropriate questions.”

Some of the participants discussed their thoughts about the healthcare provider's ability to deliver competent and culturally-appropriate care. Specifically, they discussed the ability of the provider to ask pertinent questions and provide relevant health services, based on the participant’s sexuality.

I think she knew to ask the appropriate questions, because of my identity markers and like for why I was there. I think that everything that happened was out of necessity, not necessarily because, she was great, but I think that was showing the importance of having doctors who are competent of caring for diverse patients. – Ruby, age 23

…at that point in time, I didn’t know much about sex. So, yes, the condoms really helped me tell me more about how that protects me and my partner from anything that they might have or I might have. So, I wouldn’t infect them. Just take better protection of ourselves. They really instilled it in me to use the condoms. Cause before I wasn’t using condoms, but I was young so I didn’t really, you know. I didn’t really know much about sex. So, what I did learn, ever since then, it was just straight condoms and condoms. – Jay, age 18

However, other participants believed that the providers could have done more to educate them about their sexual risk. They felt their providers were not as knowledgeable about same-sex practices, and therefore not able to connect with and educate them in a meaningful way. This led some of the participants to think less of their interactions with their healthcare providers.
I think one is that the medical field is still not knowledgeable of what gay sex looks like. I mean they have a general concept of it. So, like penises do this, so, this is what you can do to prevent getting anything from a penis, but in general, the other factors about sex, they’re not getting into it with you. And there may not also be a lot of people in the field to care enough to explain that. There’s still a lot of sexual stuff I still don’t know about gay sex… – Cheese, age 21

Another participant discussed his negative experience in the healthcare setting while talking to a medical doctor. He felt that the person talked over him, making him feel like his opinion didn't matter. From his perspective, he should have been discussing his health with his provider; instead, he thought she did all of the talking. He had a perception that race may have been a factor but he was not entirely sure.

It was an older lady, older white lady. But, I kind of feel like she was acting funny because she wouldn’t let me talk. You know I was trying to talk to her, and then she’ll speak louder to over talk me. And you know, I was trying to sit there and explain. Like everything I was trying to say, she over talked me. So, you know I was kind of feeling some type of way. And I didn’t want to leave because it was dealing with my medication…I was just kind of sad, like, why is she treating me like this? Like, what did I do to her? – Red, age 21

Another participant stated that the educational session provided to him by the health provider was not helpful, as it was information he had heard previously.

I mean not really cause I already knew that stuff. I mean it was kind of just like I know, I know. I’m gonna – you know? And it was like sweet that he was saying it and cares. And wanted me to make sure, but it’s just been drilled in my head so many times. He was just like, just review. So I mean I guess yeah it was helpful. Nice little review session. – Blue Jay, age 18

4.2.3.2 Failure to inquire about sexuality - "They never asked about my sexual partners or orientation."

Despite providers being very familiar with the participants’ health and health behaviors, some providers did not ask them about their sexual orientation or the gender of their partners. Some of the reasons for nondisclosure were fear, never being asked, and lack of privacy in the clinical setting.

Actually, I don’t ever think they’ve asked about my orientation. I wouldn’t mind telling them. But I don’t think it’s been asked. I’m always asked about my sexual
activity. Like [if] I’m active or not. But it’s often not that deep to them I guess. – Ryan, age 19

Although the participant had been going to the same doctor all his life, he does not feel comfortable talking to his doctor about his sexuality. Even if his provider were to ask him about his sexual orientation or the gender of his sexual partners, he still might not disclose, because he fears the doctor would tell his parents.

…I have not explicitly told him that I am a homosexual male. I think it’s also just like that perception of, ‘Oh! Maybe he’ll tell my parents,’ or I don’t know. Even though I know maybe he wouldn’t, I think it’s just that perception of that he might. That it could be exposed on some document that my parents would see. That I don’t want to have to have the conversation about right now. – Dove, age 19

Some participants who did not feel comfortable telling their primary provider about their same-sex desires, did feel comfortable telling the providers at the health department. Many of the participants had the same primary care provider, chosen by their mothers, since childhood. For some, this served as a barrier to openly discussing matters of sexual health, particularly same-sex relations. Therefore, they went to the health department for matters relating to their sexual health.

I’ve never told him that, you know, I’m gay or my sexual history. I don’t know, I’m just, just kinda nervous to tell them about him [primary care provider] about it. I’d prefer to just go to a [health department]. I’m just nervous telling somebody that I have sex with men. I guess that affect[ed] that, I went and got it out of the way. I prefer to go there, to get testing, questions... – Shaggy, age 22

4.2.4 Conversations about PrEP

4.2.4.1 Inadequate provider-initiated conversations

Many of the participants did not find out about PrEP in the clinical setting, but in the community through friends and sex partners (30%) and social media (43%). Some participants reported that their healthcare provider never mentioned PrEP when discussing HIV-prevention methods.
They gave me condoms. I've never had a conversation about PrEP...Umm just like things to look for with STDs. Like, do it with the lights on. Look at it before you [laughs]. – Max, age 24

Some providers did not discuss PrEP at all with the patient, or the conversation was awkward, and the participant did not get much out of it. Another participant stated that he dismissed the provider’s conversation about PrEP, based on how the provider provided presented the information about PrEP.

I feel like the lady who I saw in May, she was hinting at PrEP, but she didn't know how to come out and just say it. Like, she was asking me if I was interested in extra precautions, and that kind of thing. But she didn't come out and exactly say PrEP. I mean I knew personally [about it] because I knew that in my own research. So, I kind of knew about it, but she didn't speak to me about it. And I don't know if it made her uncomfortable or … [laughs] I think I mentally dismiss[ed] the whole actual step. So, I guess she kind of read that… she made it awkward [laughs]. – Ricardo, age 19

However, many of the participants had varying levels of knowledge about PrEP itself, how to obtain and use it, and its relevance for their sexual health. The provider may or may not have provided detailed information about PrEP, how to obtain it, and how it works. The only person in the study who used PrEP could not accurately recall what he learned about PrEP. Despite being on PrEP for a year, he could articulate very little about PrEP, or why it was appropriate for him.

When asked what he knew about PrEP, he had very basic knowledge of PrEP.

Cause when I had first got on PrEP, they was telling me that it protects you from people that have HIV. She told me that, like, if I had run across someone with HIV, it would stop it. Is that true? They told me it would stop the person with HIV. And then, she was saying something like it won't get in your bloodstream if a person has HIV. It was another one that she said, like, if I cross a person with HIV. I can’t remember the second one. That’s…I don’t think I can remember any more.
– Red, age 21

I mean they offered PrEP, then they gave me a bag of condoms. No, well, not really offered. We talked about it, but we never like, ‘Oh well let’s put you on this.’ It was more like, here’s some condoms, just take better care of yourself to make sure that you keep your personal health in check…I think back then I didn’t really know about PrEP to really make that decision to – oh you know, ‘I’m going to take this.’ Uhh so no, yeah back then I don’t think I would have been able to know enough about PrEP to take it. – Jay, age 18
4.2.4.2 Patient-initiated conversations “Depends on the provider if I discuss PrEP”

Patients and healthcare providers feeling uncomfortable in the clinical setting, not only has implications for disseminating information about sexual health, but also PrEP. One participant was asked if he would talk to a doctor about PrEP at his next clinical visit, and he responded it depended if he perceived them to be LGBT-friendly and judgment-free.

Depends on the provider. Depends whether they’ll judge me. Depends if they are super conservative or not you know, and if I know that one is LGBT friendly, then I will ask them. – Kaiser, age 22

One participant would not talk to his primary care physician about PrEP. He would not feel comfortable talking to him about getting PrEP for protection, given that he had not spoken to the physician about his sexuality or sexual partners. This also stemmed from his fear that the physician would disclose his sexuality to his parents, and therefore he is avoiding having this conversation with the provider.

If I [had to ask] my primary care doctor I probably wouldn’t talk about it. Cause we haven’t previously talked about my sexual experiences. I still have the card from the guy who came to my school, and the guy who did my second HIV test, I would just go to him directly. ‘Cause I already feel comfortable with him. But because he [primary care doctor] hasn’t, you know, opened that conversation with me yet then I’m still kind of in this weird area of like I don’t really know what to say to him about it. – Dove, 19

The fear of asking about PrEP due to their sexual orientation can be linked to participants’ perceptions of being judged for their same-sex sexual activities, particularly as African American MSM. A couple of the participants stated this as a reason for not only wanting to disclose their sexual orientation but also for their reluctance to ask their primary care providers for PrEP.

We’re all seen as being really sexually active, they see us [as] having sex all the time, like, sexually risky, no condoms...I guess just being nervous...just bringing it up... just the idea of guys on PrEP are really sexually risky. Like, just out, so I’d just be nervous, like, to just ask [healthcare providers] about it, ’cuz I feel like that would make them think a certain way about me if that makes sense. – Shaggy, age 22
4.2.5 Discussion

This study is among the first studies to qualitatively explore African-American YMSM’s experiences in the healthcare setting and how these experiences directly affect their potential future use of PrEP. The findings from the study highlighted several important themes related to African American YMSM’s experiences seeking HIV-prevention and sexual health services, and how these experiences influence their likelihood of getting information, accessing, and possibly using PrEP.

4.2.5.1 Facilitators for PrEP use

The participants discussed several factors that facilitated access to healthcare services: ease of access, familiarity with the healthcare provider, and facility type as some factors that promoted access to health services in African American YMSM. Several of the participants discussed factors that allowed them to access timely HIV-prevention and sexual health services. Participants preferred walk-in hours, community clinics, and local health departments for care. Many of the participants worked or were still in college and therefore it was important to have access to clinics with flexible scheduling. This has been highlighted in the literature where African American YMSM preferred the local health departments versus traditional primary care centers, seeing them as more accessible and LGBT-friendly (Eaton et al., 2014; Raifman, Flynn, et al., 2017). This choice is also congruent with the participants’ preference for community clinics and health departments because of their needs for informed, convenient, and confidential services.

Many of the participants in this study had the same healthcare provider since early childhood. Having such a long-standing relationship would seem to make it easier for providers to recommend PrEP and follow-up with patients (Bien, Patel, Blackstock, & Felsen, 2017). However, that was not always the case. However, it has been noted in the literature that African

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American YMSM have a preference for emergency rooms, health departments, and community testing sites for services rather than a private healthcare provider’s office, as they believed the intake process to be more streamlined, and allowed them to avoid personal questions related to their sexuality (Behel et al., 2008; Eaton et al., 2014; M. E. Levy et al., 2016; Mimiaga et al., 2009).

It was important to some of the participants to have a health provider that shared their characteristics including race, sexual orientation, etc.. Participants reported it made them feel more comfortable, and therefore more likely to talk about sensitive matters related to sex or their sexual orientation with such healthcare providers. This finding of a preference for providers who share similar characteristics has also been noted by others. African American YMSM felt more comfortable if the provider was black, male, and/or openly gay (Earl et al., 2013; Malebranche et al., 2004; Wilson et al., 2009). However, in this and other studies (Behel et al., 2008), not sharing characteristics with healthcare providers did not stop African American YMSM from expressing overall satisfaction with the services received at the health centers.

4.2.5.2 Barriers to PrEP use

The participants discussed several factors that could potentially serve as barriers to potential PrEP in the future. These factors included lack of self-disclosure of sexual orientation, difficulty accessing care, and providers lack of discussion about PrEP. Several participants stated that they did not feel comfortable disclosing or discussing their sexual orientation or sexual behaviors with their primary care providers fearing that their health providers would discuss their same-sex behaviors with their parents. In fact, for some participants, their mothers were in the room during the healthcare visit. Many of the participants also stated that health providers did not inquire about their sexual behaviors or the gender of their sexual partners. Healthcare providers who do not inquire about their patients’ sexual behaviors or partners miss opportunities to inform their patients about PrEP (Raifman, Nunn, et al., 2017). In studies measuring PrEP awareness,
African American MSM were less likely to be aware of PrEP in comparison to white and Hispanic MSM (Bauermeister et al., 2013; Fallon et al., 2017; Raifman, Flynn, et al., 2017). Furthermore, studies have reported that when African American MSM are educated about PrEP by their health providers, they are more willing to use PrEP as a method of HIV-prevention (Arrington-Sanders et al., 2016).

Many of the participants reported that they did not have a regular primary care provider for care (36%, n = 9), were self-pay, or did not have or were unsure if they had health insurance (32%, n = 8). Several of the participants mentioned that prior to age 18 or going off to college their mothers were their primary contact with the healthcare system. Now that they were adults they 1) have aged out of pediatric care and had not transitioned into adult care, 2) did not know how to find a new primary care provider or navigate their health insurance plans, or 3) could not afford the cost of care. It is not uncommon for African American YMSM to be underinsured (Meanley et al., 2015), or not be able to afford healthcare (Almquist et al., 2009; Irvin et al., 2014; M. Levy et al., 2014), or not be linked to care (Irvin et al., 2014). Additionally, African American families (Querido, Warner, & Eyberg, 2002), particularly mothers (Cabrera, Fagan, Wight, & Schadler, 2011), tend to be heavily involved in their children’s care, which may have the unintended consequence of leaving their child without the critical skills needed to navigate the healthcare system on their own (Cooley & Sagerman, 2011). Even though transitioning adolescents and young adults to adult care has been studied widely in the literature, the focus has primarily been on chronically ill adolescents transitioning to adult care, and not healthy adolescents (Betz, O’Kane, Nehring, & Lobo, 2016; Gabriel, McManus, Rogers, & White, 2017). Given the need to increase PrEP use in African American YMSM, who are more likely to become HIV-infected by age 19 (Millett, Jeffries, et al., 2012), it is imperative that future studies examine best practices to keep African American YMSM consistently engaged in the healthcare system.
Primary care providers need to ensure that adolescents are linked to adult care prior to being released from pediatric care (Doblecki-Lewis et al., 2017). Some of the participants in the study were not linked to a primary care provider which created a potential gap in resources and a delay in their being educated about and obtaining PrEP. It would be beneficial if clinics developed transition programs or created transition care teams for the healthy adolescent and young adult (Betz et al., 2016). These programs could teach adolescents the basics of how to navigate the healthcare system increasing their ability to maintain contact with care providers. Healthcare providers need to be trained on how to initiate conversations about sexual behaviors and PrEP, particularly for high-risk patient populations (Chapman, Watkins, Zappia, Nicol, & Shields, 2012).

Participants had a range of experiences with PrEP in the clinical setting, from a quick mention of PrEP to a brief educational session. Overall, only one participant had an in-depth conversation about PrEP with a health provider. Another participant described the conversation with his provider about PrEP as “awkward.” While several studies have reported that African American YMSM have been offered PrEP in the clinical setting (H. L. King et al., 2014), very few, if any, studies have reported the content of these PrEP conversations, or African American YMSM’s thoughts regarding these discussions. Existing studies on African American YMSM and PrEP have mainly focused on the feasibility (Hosek, 2013, Hosek, 2012 #3497), knowledge, awareness, and willingness to use PrEP (Bauermeister et al., 2014; Eaton, Driffin, et al., 2015; Kuhns, Hotton, Schneider, Garofalo, & Fujimoto, 2017). The educational needs of African American YMSM in the clinical setting is a critical gap in the literature. Healthcare providers need to know how to approach the topic of PrEP and what information needs to be provided to African American YMSM to increase the uptake of PrEP in this population (Calabrese et al., 2016; Doblecki-Lewis & Jones, 2016).
4.2.5.3 Limitations

As with all research, this study has limitations. Participants were recruited from several metropolitan areas throughout North Carolina, Maryland, and Washington, D.C., area with different political, social, and economic environments. Additionally, participants were recruited from online applications (Facebook, dating applications) and a community organization that primarily served African American MSM and transgender women. Participants who were recruited from these locations may have been inherently different from participants who were recruited by friends or recruited from community events. Also, the participant interviews were conducted at a single point in time. Participants’ insights and experiences likely changed over time. Nevertheless, the goal of the study was not to provide a representative sample, but to gain a deeper understanding of the facilitators and barriers to African American YMSM potential future use of PrEP. The diversity of responses from this sample provided a range of rich descriptions (M Sandelowski, 2000) to describe what factors would affect use of PrEP. Another limitation in this study was that the majority of participants had health insurance, providing more access to healthcare services, as compared to African American MSM in other studies (cite).

4.2.6 Conclusion

This study found evidence that there are individual, social, and structural barriers and facilitators to African American YMSM’s seeking HIV-prevention and sexual health services, thereby potentially creating barriers to the likelihood in the greatest need of PrEP.

The CDC’s (2014) PrEP practice guidelines recommends primary care providers as the best person to prescribe PrEP, as they are familiar with their patients’ medical history. Identifying patients at high risk for HIV, and therefore PrEP, requires primary care providers to gather information on sexual history (i.e., sexual behaviors, orientation, etc.), educate the patient
concerning HIV risk and risk-reduction methods (e.g., PrEP), and if appropriate, prescribe PrEP (Nunn et al., 2017; Underhill et al., 2010).

African American YMSM expect healthcare providers to be non-judgmental, professional, (Malebranche et al., 2004), welcoming, and knowledgeable about the health services they deliver (Rowan et al., 2014). Concordance between African American MSM and their provider has a positive influence on the quality of care, including preventive care and communication (Maulsby et al., 2014), which can lead to an increase in PrEP uptake. African American MSM in this study expressed difficulty finding convenient, affordable, and confidential adult healthcare services. Pediatric and primary care centers should develop health initiatives that will aid adolescent and young adults in finding culturally and developmentally appropriate healthcare services.
5. Conclusion

5.1 Introduction

This dissertation aimed to provide a deeper understanding of the facilitators and barriers to the likely use of PrEP in African American YMSM. To achieve this overarching goal, the adapted Common Sense Model of Illness Representation (CSM) (Diefenbach & Leventhal, 1996) was used to guide this dissertation. A different approach was taken in each of the chapters. In Chapter 2, the adapted CSM was used as a guiding framework to explore the current literature on facilitators and barriers to PrEP use for African American MSM. In this chapter, the usefulness of the adapted CSM as a conceptual framework to understand how African American YMSM’s was examined. In chapters 3 and 4, a qualitative methodology was employed to explore, from the African American YMSM’s perspective, how individual, cultural, and social factors, and experiences in healthcare can serve as barriers or facilitators to African American YMSM's likely use of PrEP.

Overall, the findings from this dissertation offer new and interesting insights and add to the current body of literature concerning African American YMSM’s likely use of PrEP. These new insights include an awareness of the existing literature on the barriers and facilitators to African American MSM’s engaging the healthcare system for PrEP; the emotional and cognitive representations that influence their perceptions of PrEP as a useful method for HIV-prevention; cultural and social factors that influence how African American YMSM perceive PrEP; and gained insight into African American YMSM’s thoughts about their experiences within the healthcare system for care. A summary of the specific findings for each chapter is highlighted below, followed by implications for research, practice, and policy.
5.2 African American MSM and PrEP Use: What We Do and Don’t Know

The systematic review offered a deeper understanding of the factors that affect African American MSM’s use of PrEP. This review examined the barriers and facilitators to PrEP for African American MSM and healthcare providers. There were some findings that identified barriers to PrEP uptake for both African American MSM and healthcare providers: awareness of PrEP, cost, discussion of sexual behaviors, perceptions of race- or sexuality-based discrimination for African American MSM, and negative beliefs and attitudes concerning sexuality and race for healthcare providers. Facilitator to PrEP use included awareness of PrEP, discussions about sexual behaviors, pharmacy and pharmaceutical drug assistance programs to cover the cost of PrEP.

5.3 Chapter 3 - “That Guy Is Gay and Black. That’s A Red Flag.”: How HIV Stigma and Racism Affect Perception of Risk Among African American MSM"

This was the first data-based chapter of this dissertation. In-depth individual qualitative interviews were conducted with African American MSM, aged 18-24, inquiring about their current methods of protection against HIV, their knowledge of PrEP, and their willingness to use PrEP as a method of HIV-prevention. The participants described experiencing racism; specifically, sexual racism, invoking stereotypes to screen and select for the lowest risk sexual partners, perceiving stigma related to HIV, internalization of negative messages about being an African American YMSM, and how this all affects potential future PrEP use. Participants reported being highly aware of the rates of HIV in the African American MSM community, which shaped their dating patterns and perceptions of risk for HIV. Of significance, participants discussed vetting processes that were based on a complex calculation of race and class; because of internalizing negative messaging about the African American community. Participants expressed the need to “vet” their African American sexual partners even more than their non-
African American partners. The need to vet sexual partners was even greater when participants compared YMSM in the community versus YMSM on college campuses.

For some participants, experiences with racism and HIV stigma in the community made them less willing to initiate a conversation about PrEP in the clinical setting, for fear of judgment from their health providers. However, once provided with a detailed description of PrEP, participants, overall, believed that PrEP was a great method to reduce their risk for HIV. Research needs to be conducted to develop clinical and HIV/PrEP prevention programs to address these potential barriers to PrEP uptake in African American YMSM. These clinical programs should include an educational component so that African American YMSM have an understanding of the purpose and use of PrEP. However, to have the highest clinical impact and cultural relevance, this research should be developed with and informed by African American YMSM.

5.4 Young African-American Men Who Have Sex with Men and their Perceptions of the Healthcare System

This was the second data-based chapter for this dissertation. This chapter built upon the knowledge of chapter 3 and explored participants experiences in the healthcare setting. This chapter also explored participants interactions with healthcare providers concerning PrEP. The participants discussed several factors that facilitated access to healthcare services; these included ease of access, familiarity of the healthcare provider, and facility type. Participants stated they preferred walk-in hours, community clinics, and local health departments for care as opposed to the traditional clinical model of set appointment times. Several of the participants discussed factors that allowed them to access timely HIV-prevention and sexual health services. Many of the participants worked or were still in college and therefore it was essential to have access to clinics with flexible scheduling. Participants also stated they preferred the local health departments versus traditional primary care centers for care; preferring to go to them for PrEP services.
5.5 Implications for Research

It is imperative that future studies examine best practices to close the healthcare gap for African American YMSM; thereby increasing access to PrEP. Participants reported that, while they had transitioned out of pediatric care, they had not been successfully linked to adult care, nor knew how to navigate the healthcare system. Research needs to examine the best practices for transitioning adolescents into adult care. Existing research has mainly focused on chronically ill adolescents transitioning to adult care, and not healthy adolescents (Betz et al., 2016; Gabriel et al., 2017). Understanding and anticipating the healthcare needs (treatments, knowledge, financial) of the transitioning adolescent will aid in closing the gap in healthcare access for this population.

5.6 Implications for Practice

There are individual, social, and structural barriers and facilitators to African American YMSM’s seeking HIV-prevention and sexual health services. African American YMSM expect healthcare providers to be non-judgmental, professional, (Malebranche et al., 2004), welcoming, and knowledgeable of health issues pertaining to MSM (Rowan et al., 2014). African American YMSM may be apprehensive about starting conversations about PrEP after experiencing racism and HIV stigma in the community. Healthcare providers should be prepared to initiate sensitive and informed discussions about PrEP with African American YMSM. Also, having concordance between African American MSM and their healthcare provider has been shown to have a positive influence on the quality of care and health outcomes for African American YMSM including preventive care and communication (Maulsby et al., 2014).

Participants’ also reported difficulty finding convenient, affordable, and confidential adult health services. Pediatric and primary care centers should develop health initiatives that will 1) link adolescent and young adults to culturally and developmentally appropriate healthcare
services, and 2) teach adolescents how to navigate the healthcare system. Such skill will enable the participants to have a smoother transition into adult care.

5.7 Implications for Policy

One of the ways to address the health disparities for adolescent and young adult African American YMSM is through policy. Although there has been much policy focused on adolescent and young adults, much of the work has focused on the chronically ill (Betz et al., 2016; Gabriel et al., 2017). Position statements, such as the one from the American Academy of Pediatrics stating that adolescents should be transitioned to adult care between the ages of 18-21 (Cooley & Sagerman, 2011), can be expanded to provide healthcare providers more guidance and when and how to be transition adolescents into adult care.

5.8 Conclusion

This dissertation study is crucial as it explores how sociocultural factors, attitudes, and knowledge influence African American MSM's willingness to seek PrEP for HIV-prevention. This study will provide a deeper understanding how these factors affect African American MSM's health-seeking behaviors and their acceptance and willingness to use PrEP. This knowledge can help to inform health programs in developing culturally appropriate health services for African American MSM. This study can also help to develop new HIV-prevention strategies to reduce rates of HIV in this vulnerable population.
### Appendix A. Search Strategy for Barriers and Facilitators to PrEP Use

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</tr>
<tr>
<td>6</td>
<td>#6 AND English[lang]</td>
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<tr>
<td>7</td>
<td>#7 NOT (Editorial[ptyp] OR Letter[ptyp] OR Case Reports[ptyp] OR Comment[ptyp])</td>
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## Appendix B. Search Strategy for PrEP and African-American MSM

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<tr>
<td>8</td>
<td>#7 NOT (Editorial[ptyp] OR Letter[ptyp] OR Case Reports[ptyp] OR Comment[ptyp])</td>
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Biography

Joyell Arscott was born in Bristol, England to Violet and George Arscott. Joyell graduated in 1999 with a B.S. in Biology and a minor in Chemistry from Towson University. Prior to her nursing training Joyell worked in public health with at-risk and HIV-infected adolescents and young adults and their health providers for 15 years. In 2006, she obtained a Development Project Management Certificate from the Monterey Institute of International Studies. Joyell later received an Associate of Science in Nursing degree from the Community College of Baltimore County (2008) and a B.S.N. from the University of Maryland, Baltimore (2010). In August 2011, Joyell enrolled in to the Duke University School of Nursing Ph.D. Program. While enrolled in the Ph.D. program Joyell completed the Certificate in College Teaching through the Duke Graduate School. Joyell has co-authored four publications and has presented at several academic conferences in both oral presentation and poster formats. To complete this dissertation, Joyell was funded in part by the 2016-2017 C. Everett Koop HIV/AIDS Research Grant, Indiana University, Rural Center for AIDS/STD Prevention; the Anne Zimmerman, RN, FAAN Endowment, American Nurses Foundation; and the Duke University School of Nursing PhD Student Pilot Study Fund. In 2011, Joyell was awarded the Student Poster Presentation Award at the 24th Association of Nurses in AIDS Care Annual Conference. She is a 2015-16 Emerging Leader in Science and Society Fellow (ELISS) through the American Association for the Advancement of Science (AAAS). In 2016, Joyell was named the Duke University School of Nursing (DUSON) Student of Year and was presented the prestigious Julian T. Abele Award for her outstanding leadership in promoting diversity, intellectual development, and activism at DUSON. Joyell was also twice nominated for the Graduate Student Leader of the Year Award (2016 and 2017). She is also a member of several professional organizations including Sigma Theta Tau International Nursing Honor Society.
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