

FACTORS RELATED TO PREP INTENT AND USE AMONG AFRICAN  
AMERICAN WOMEN IN TEXAS

A DISSERTATION

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## DEDICATION

This dissertation is dedicated to my children, Imanni and Jaden, thank you for your love, support, and patience. To my Aunt Robin, I could not have done this without your assistance. Dr. Elias Jabour and the leukemia staff at M.D. Anderson Cancer Center thank you for helping me keep the faith and fight to finish.

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## ABSTRACT

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### FACTORS RELATED TO PREP INTENT AND USE AMONG AFRICAN AMERICAN WOMEN IN TEXAS

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The purpose of this study was to examine if relationships exist between attitudes toward condom use, HIV stereotypes, HIV knowledge, perceived HIV risk, intent to use PrEP, and PrEP use among African American cisgender women who reside in Texas. The current study is a secondary data analysis of a primary study conducted among African American cisgender women. Data were collected via an online questionnaire and exported to IBM Statistical Package for the Social Sciences (SPSS) version 25 for analysis. Results of this study reveal African American cisgender women who have not used PrEP as a prevention strategy possessed favorable attitudes toward condom use compared to women who have used PrEP as a prevention strategy. African American cisgender women who exhibited favorable perceptions of negative stereotypes regarding HIV held weak intentions of using PrEP. Identified barriers to using PrEP include unawareness of PrEP and its availability, low HIV risk perception, competing life priorities, high cost for PrEP medication continued use, non-compliance due to social issues, stigma associated with PrEP use, mistrust of medical institutions, and practitioner disclosure issues

related to sexual behaviors. To address individual and community needs for health education, health educators must implement interventions/programs to increase awareness of and PrEP acceptability by African American women. Additionally, health educators should also provide information about the safety and efficacy of PrEP across communication channels to reach a diverse audience. Health educators should organize and implement PrEP provider education facilitated by physicians currently using PrEP to train fellow physicians and clinicians how to assess their patients' sexual and substance abuse history and educate patients about the availability of PrEP. Additionally, the study revealed 41.5% of respondents reported they were currently taking PrEP.

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## CHAPTER I

### INTRODUCTION

African American women are inexplicably plagued by Human Immunodeficiency Virus (HIV) at discouraging rates. In relation to other demographic groups, HIV increasingly and disproportionately affects African American women. A 2018 report by the National Minority AIDS Council maintained that African American “women are 20 times more likely to get HIV than white women” (National Minority AIDS Council [NMAC], 2018, para. 2).

In 2017, African American women comprised 13% of the female population in the United States; however, African American women accounted for 60% of HIV diagnoses among females (Centers for Disease Control and Prevention [CDC], 2017b).

In 2017, researchers revealed that “Caucasians made up 63% of the female population, and accounted for 20% of diagnoses of HIV infection among females; Hispanics/Latinos made up 16% of the female population and accounted for 15% of diagnoses of HIV infection among females” (Centers for Disease Control and Prevention [CDC], 2017b, p. 9). Historically, most HIV research including African American women has focused on young, low socioeconomic status (SES) African American women because of the elevated HIV transmission rates within low SES communities (Adimora & Shoenbach, 2005; Kyomugisha, 2006; Sionean et al., 2014).

Despite important advances in biomedical HIV prevention strategies, differences exist in rates of infection among marginalized populations. According to El-Bassel, Caldeira, Ruglass, and Gilbert (2009), “African American women continue to be disproportionately affected by the HIV/AIDS epidemic, yet there are few effective HIV prevention interventions that are exclusively tailored to their lives and that address their risk factors” (p. 1). Pre-exposure prophylaxis (PrEP), an oral medication, is a biomedical prevention strategy approved by the Food and Drug Administration (FDA) in 2012 that can reduce HIV transmission by impeding viral replication after HIV enters the body (Calabrese, Underhill & Mayer, 2017; Krakower & Mayer, 2015; Ojikutu et al., 2015; Rendina, Whitfield, Grov, Starks, & Parson, 2017; Turner, Roepke, Wardell, & Teitelman, 2018).

To date, acceptance, uptake, and continued use of PrEP have been extremely low among African American women. PrEP has been prescribed at much lower rates than anticipated (Braksmajer, Senn, & McMahon, 2016; Bailey, Molino, Vega & Badowski, 2017). Petroll et al. (2017) reported, “While nearly 500,000 men who have sex with men (MSM) and 1.2 million U.S. adults overall could benefit from being on PrEP, only about 80,000 people are thought to be taking PrEP” (p. 2). One year after PrEP was proved as an effective regimen for preventing HIV transmission, fewer than 2,000 Americans were prescribed the drug (Krakower & Mayer, 2015). According to Tekeste et al. (2018), “in a national study of PrEP uptake women only accounted for 5% of PrEP prescriptions in the United States in the fourth quarter of 2017” (p. 1). African American women are interested in PrEP due to the high incidence and prevalence of HIV in their community.

As an example of this interest, results from an online survey of 501 adult female Planned Parenthood patients (241 African American; 260 Caucasian) revealed, “65% report some level of interest in learning more about PrEP, 58% would consider initiating PrEP if it were available for free, and 42% reported some level of discomfort in speaking with their healthcare provider about PrEP” (Tekeste et al., 2018, p. 4). However, despite its benefits and African American women’s documented interest in learning about PrEP, utilization of PrEP as a biomedical prevention strategy is low due to distrust of the medical system, stigma, and cost (Auerbach, Kinsky, Brown & Charles, 2015).

### **Gaps in Literature**

Despite increased incidence and prevalence of HIV/AIDS among African American women, there are no clinical trials that have examined PrEP use among this population. To date, PrEP researchers have primarily focused on MSM, transgender women, and high risk heterosexuals (Auerbach et al., 2015; Bailey et al., 2017; Chard, Metheny, & Stephenson, 2017; Deutsch et al., 2015; Elopre, Kudroff, Westfall, Overton, & Mugavero, 2017; Flash, Stone, Mitty, Mimiaga, Hall, Krakower, & Mayer, 2014; Garnett et al., 2018; Krakower & Mayer, 2015; Krakower, Ware, Mitty, Maloney, & Mayer, 2014; Krakower et al., 2017; Thomann, Grosso, Zapata, & Chiasson, 2018). In addition, there are few studies that have examined HIV knowledge among African American women or the impact of conspiracy beliefs and stereotypes on HIV prevention efforts among African American women. This study seeks to add to the limited information on intent to use PrEP and PrEP use among a sample of African American women who live in Texas. Texas Department of State Health Services (DSHS, 2017),

reported staggering HIV statistics among African American women living in Texas. Although they account for only 12% of the female population in the state, they account for 57% of women living with HIV, “the rate of black women living with HIV is 7.8 times the rate of Hispanic women living with HIV and 13.8 times the rate of white women” (DSHS, 2017, p. 1). In Texas, unprotected sex with a male partner was the primary mode of HIV transmission for African American women, and “twenty-five percent of black women in Texas were diagnosed with HIV late in the progression of the disease” (DSHS, 2017, para. 3).

### **Purpose of the Study**

Among adults across ethnicities, PrEP use is influenced by attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risk (Auerbach et al., 2015; Collier, Colarossi, & Sanders, 2017; John, Babalola, & Chipeta, 2015; Krakower & Mayer, 2015; Ojikutu et al., 2015; Roberts & Kennedy, 2006; Tekeste et al., 2018; Whiteside, Harris, Scanlon, Clarkson, & Duffus, 2011). Sociodemographic factors, behavioral factors, and social factors have been identified in previous studies as barriers to PrEP uptake (Auerbach et al., 2015; Bailey et al., 2017; Krakower & Mayer, 2015; Krakower et al., 2014; Khawcharoenporn, Kendrick, & Smith, 2012; Kwakwa et al., 2016; Ojikutu et al., 2015; Schnarrs et al., 2018; Tekeste et al., 2018; Wingood et al., 2013). The purpose of this study was to examine if relationships exist between domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, perceived HIV risk, intent to use PrEP, and PrEP use among African American women who reside in Texas. The independent variables for this study were domains of attitudes toward condom use,

HIV stereotypes, HIV knowledge, and perceived HIV risk. The two dependent variables for this study were intent to use PrEP and self-reported PrEP use. Due to the cross sectional design of this study, the relationship between intent to use PrEP and self-reported PrEP use was not examined.

### **Theoretical Foundations**

According to Rosenthal and Levy (2010), “theoretical models to date have fallen short of accounting for the alarming worldwide rates of HIV infection in African American women through heterosexual contact” (p. 21). Consequently, this secondary data analysis study is descriptive and therefore underpinned by theoretical constructs but does not test an entire theory. Theory of gender and power (TGP) influenced this study by positing women possess less decision-making authority than men within a heterosexual relationship. The TGP is the only HIV specific theory influencing this study. The TGP summarizes HIV risk into three domains “for women: sexual division of labor, affective attachments/social norms, and the sexual division of power” (DePadilla, Windle, Wingood, Cooper, & DiClemente, 2011, p. 310). Sexual division of labor encompasses socioeconomic status and education while sexual division of power and encompasses violence and abuse factors that influence women's negotiation of condoms and other protective behaviors within relationships (DePadilla et al., 2011). Affective attachments are generic roles dictated by culture. Wingood and DiClemente (2000) characterize affective attachments on the societal level as “appropriate sexual behavior for women and is characterized by the emotional and sexual attachments that women have with men. This structure constrains the expectations that society has about women

with regard to their sexuality and, as a consequence, shapes our perceptions of ourselves and others and limits our experiences of reality” (p. 544).

Socioeconomically disadvantaged African American have a lower probability of negotiating with male partners than socioeconomically advantaged women, while socioeconomically advantaged women have more power in relationships and are inclined to make more preventive and protective decisions that may be contrary to their male partner’s wishes (Braksmajer et al., 2016; Cornielius & Kershaw, 2017; Flash et al., 2014; Willie, Kershaw, Campbell & Alexander, 2017). Monetary reliance on male partners often limits women’s power to negotiate safer sex practices. Accordingly, women residing in low-income neighborhoods reported more unprotected sex than women not living in low-income neighborhoods and women with more social support reported less condomless sex than women with more perceived social support (Sales, DiClemente, Davis, & Sullivan, 2012). As Mallory, Harris, and Stampley, (2009) observed, “the theory of gender and power offers an understanding of the context of sexual negotiation and communication between women and their men partners” (p. 1251).

The TGP seeks to examine and predict effective HIV interventions for women. The theory provides a framework to contextualize the sexual manifestations of low income including a woman’s perceived risk of a partner’s sexual history and drug use as well as the influence of social norms, lack of knowledge, and desire to conceive on a woman’s sexual behaviors. African American women who leverage sex to meet financial needs increase HIV-related vulnerability.

To date, public health practitioners and researchers interested in reducing HIV transmission have not focused consistent attention on the interplay of individuals and their environment in HIV prevention efforts. The TGP provides a framework to explain, predict, and understand inequities caused by gender, poverty, low education levels, abuse and social norms. The TGP is an important tool to frame and contextualize African American women's sexual behaviors in this PrEP study. The TGP asserts that women in heterosexual relationships have diminished power and decision-making authority because of their gender role expectations in society.

In addition to the TGP, traditional health behavior theoretical constructs are also important to this study. By examining factors related to intention to use PrEP, this study includes constructs embedded within the theory of planned behavior. TRA (the predecessor to the theory of planned behavior) posits that health behavior is influenced by a person's attitudes, subjective norms, and normative beliefs about the behavior, suggesting a person's attitudes and beliefs about a specific behavior will influence what they ultimately do (Ajzen, 1991). Ajzen (1991) defined subjective norms as an "individual's beliefs about peer and partner acceptance and practices of a behavior" (p.188). Ajzen also stated that "normative beliefs are concerned with the likelihood that important referent individuals or groups approve or disapprove of performing a given behavior. The strength of each normative belief is multiplied by the person's motivation to comply with the referent in question" (Ajzen, 1991, p. 195). Mulawa et al. (2016) defined normative beliefs as "the behaviors and or beliefs of one's peers" (p. 36).

Peters and Templin (2010) asserted “the theory of planned behavior (TPB) postulates that attitude, subjective norms, and perceived behavioral control predict intention, and intention along with perceived behavioral control predicts actual behavior” (p. 2). Together, the theories of reasoned action and planned behavior assume that people's actions are guided by their intentions, influences, attitudes, and subjective norms.

### **Research Questions**

**Research Question 1:** How do domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risk influence intent to use PrEP among African American cisgender women?

**Research Question 2:** How do differences in domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risk vary among African American cisgender women who self-report PrEP use?

### **Hypotheses**

**Hypothesis 1:** There is no statistically significant difference in attitudes toward condom use, HIV stereotypes, HIV knowledge, perceived HIV risk, and intent to use PrEP among African American cisgender women.

**Hypothesis 2:** There is no statistically significant difference in levels of domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, perceived HIV risk and PrEP use among African American cisgender women.

### **Delimitations**

The current study has the following delimitations:

1. Participants were African American cisgender women aged 18 years and older and living within the state of Texas.
2. Participants completed the Be-PrEPared Survey in English.

### **Limitations**

The current study has the following limitations:

1. Survey data were self-reported and therefore subject to social desirability bias, inaccuracies, errors, and reporting bias which limit external validity.
2. The primary survey instrument did not assess participants' sexual orientation.
3. Snowball sampling is a non-probability procedure that was used to select the primary study participants. Snowball sampling is a two-stage convenience or purposive sampling method, which limits the findings' generalizability and may introduce bias due to lack of random sampling.

### **Assumptions**

The current study has the following assumptions:

1. Participants responded honestly to survey questions.
2. Participants understand (read and write) English.

### **Definitions of Terms**

**Cisgender** – “individuals whose gender expression coheres with the gender they were assigned at birth, their bodies, and their gender identities. A person whose gender identity matches their sex assigned at birth” (McCabe & Sumerau, 2018, p. 353).

**PrEP** - Pre-exposure prophylaxis (PrEP) is the medication Truvada, a “once-daily prescription medicine that can help reduce the risk of getting HIV-1 through sex, when taken every day and used together with safer sex practices” (Gilead Sciences, Inc., 2018, “What is Truvada for PrEP?,” para. 1). Truvada is one pill that combines the medications tenofovir and emtricitabine.

**Perceived HIV risk** - A person’s belief of the likelihood they will contract a disease. “Risk perception is a highly personal process of decision making, based on an individual’s frame of reference developed over a lifetime, among many other factors” (Brown, 2014, p. A277).

**Serodiscordant** - Being a couple in which one partner has tested positive for HIV and the other has not (Serodiscordant, 2015).

### **Importance of the Study**

In 2018, African American women remain at an elevated risk for acquiring HIV despite advances in HIV prevention. One such prevention mechanism is Truvada for PrEP, a medicine that prevents HIV transmission from a person living with HIV/AIDS to an HIV negative person. Even though African American women are at elevated risk for contracting HIV and Truvada is an FDA-approved medication, many women are either unaware of PrEP or are aware of the medication but are uninterested in taking such a preventative measure. The purpose of this study was to examine the factors influencing intent to use PrEP and PrEP use among a sample of African American cisgender women in Texas.

An overarching goal of this study is to increase awareness, uptake, and use of PrEP among African American cisgender women as a biomedical HIV prevention strategy. Emerging biomedical prevention strategies such as PrEP and evidence based approaches to dissemination are key to curbing the HIV infection disparities observed among women across ethnicities. Researchers estimate that increasing PrEP uptake among at risk populations could significantly reduce HIV incidence in the United States over the next five years (Collier et al., 2017). Consequently, this study is intended to inform health education specialists and public health practitioners about the relationships between women's domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risk. There are distinct challenges to promoting and increasing use of biomedical HIV prevention strategies such as PrEP to an audience of African American women. Identifying and describing factors related to intention to use PrEP and PrEP use as an HIV prevention method will offer insight to contextualize the challenges, and contribute to the existing body of PrEP-related literature. This information will assist health educators in planning, marketing, implementing, and evaluating community interventions that facilitate health equity.

## CHAPTER II

### REVIEW OF THE LITERATURE

Within this literature review, this author will systematically identify and examine recent and relevant literature regarding the study variables and larger study context relating to PrEP use by African American women. This literature review uses elements of Garrard's Matrix Method and the Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines (Garrard, 2014; Moher, Liberati, Tetzlaff, & Altman, 2009). Two research questions guided the literature review:

1. How do individual, interpersonal, and sociodemographic factors influence intent to use PrEP and PrEP use among African American women?
2. What are the barriers to PrEP use among African American women?

The databases accessed to conduct this literature review were: (a) Medline/PubMed, (b) CINAHL, (c) Nursing- ProQuest Database, (d) Scopus, and (e) Google Scholar. Search terms included MeSH terms and Subject Headings where appropriate. Search terms included combinations of: HIV, PrEP/pre exposure prophylaxis, African American/blacks, women/female, condoms, theory of gender and power, theory of planned behavior, perceived HIV risk, HIV stigma, and HIV stereotypes. Inclusion criteria for this literature review included English language, peer-

reviewed journal research articles, websites, books, book chapters, and government documents from January 2000 to January 2019 focusing on African American women. Special attention was given to research published after 2012 due to the date Truvada was approved by the FDA. The search excluded: studies published outside of the United States, studies focusing on ethnicities other than African American, studies focusing on women living with HIV/AIDS, PrEP studies, primarily including MSM and individuals who identify as transgender and articles that did not include novel research findings such as commentaries, letters to the editor, and resource reviews.

### **African American Women As an At Risk Population**

When compared to women of other ethnicities, African American women are contracting HIV with greater frequency. According to Ivy, Miles, Le, and Paz-Bailey (2014), “African American women comprised only 13% of the female population, [yet] 64% of the estimated 9,500 new infections in women occurred in African Americans” (p. 1). Within Texas, African Americans of both sexes comprise 12% of the population, but this demographic group accounts for one-third of the new HIV diagnoses (Houston Health Department, 2017). More specifically, current statistics reflect that African American heterosexual women are 10% of residents living with HIV, and most new infections in women are attributed to heterosexual sex (Houston Health Department, 2017). African American women are 20 times more likely to have HIV than their Caucasian counterparts (Braksmajer et al., 2016; Sileo, Sileo, & Prater, 2008).

Although being African American and female are not isolated and independent risk factors for sexually transmitted infections, these demographic characteristics in

conjunction with sexual risk behaviors, social networks, and SES factors help to explain the racial and ethnic disparities in HIV/AIDS prevalence (Buzi, Weinman, & Smith, 2015; Elifson, Klein, & Sterk, 2010). A lack of socioeconomic resources is linked to engaging in high risk sexual behaviors, which can place a person at increased risk of contracting HIV. Research by Morrison-Beedy, Carey, Crean, and Jones (2010), reported that monetary reliance on partners, low self-esteem combined with a need for love, alcohol and drug use, and idealistic predispositions increase HIV exposure risk among African American women. Researchers have recommended that future HIV research focus on women's unique psychosocial circumstances to predict their risk of contracting HIV (Elifson et al., 2010; Flash et al., 2014; Kwakwa et al., 2016).

### **Attitudes toward Condom Use**

For more than three decades, male condoms have been portrayed as the primary barrier method to against all sexually transmitted infections. Despite this emphasis on condom use, heterosexual women face seen and unseen barriers that inhibit correct and consistent male condom use during oral, anal, and vaginal intercourse. According to Flash et al. (2014), "for heterosexual women, barriers to condom use include fear of perceived unfaithfulness, financial barriers, personal perception of being low-risk, educational status, and desire to conceive" (p. 635). Past research identified a correlation between self-esteem levels and risk behavior. According to Ellifson, Klein, and Sterk (2010) "women with the lowest self-esteem had the most antagonistic feeling about using condoms" (p. 98). Monetary dependence on a man can also affect condom use.

Disproportionate poverty rates among African American women have forced them into traditional gender roles that cause them to be dependent on males and use sex as a survival mechanism. Consequently, African American women living in poverty are less likely to negotiate condom use. Statistics reinforce that HIV positive women report less power in relationships to negotiate condom use (Sharpe et al., 2012).

### **Condom Efficacy and Reliability**

A qualitative study conducted among African American undergraduate students revealed high levels of HIV transmission and prevention knowledge (McLaurin-Jones, Lashley, & Marshall, 2017). However, substance abuse, monogamous relationships, peer norms, and negative attitudes toward condoms were cited as barriers to condom use among the sample. African American college students shared reservations about the reliability of condoms due to condom failures. In addition, women in this study assessed their risk of HIV within their sexual relationships. Women participating in the study cited trust in their partner and their belief that they were in a monogamous relationship as reasons why they did not use condoms. According to McLaurin-Jones, Lashley, and Marshall (2017), “African American women perceived condoms as having a high failure rate, in spite of evidence to support condoms are 98% effective when used consistently and correctly” (p. 811). In a study of college students, 67% of the sample did not know how to correctly apply a male condom during a demonstration (McLaurin-Jones et al., 2017).

## **Condom Pleasure**

Male condoms have been rejected and criticized by men and women due to real and perceived decreased sensation and physical pleasure during sex. Women who encountered resistance from their partners to use condoms were less likely to demand or insist future condom use (Roberts & Kennedy, 2006). Recent studies have suggested “that a desire for sexual enjoyment can play a role in women's contraceptive behaviors, and U.S. women and men ranked pleasure as equally important in evaluating a contraceptives acceptability” (Higgins & Hirsch, 2008, p. 1803). Women acknowledged that their lack of contraceptive use was influenced by a desire to please their partner and provide sexual pleasure; they wanted sex to feel as natural as possible. The women in this study also complained that condom use exacerbated vaginal dryness (Higgins & Hirsch, 2008).

Previous researchers have discovered that women must have favorable attitudes toward condoms, appropriately perceive their HIV risk, and feel that they have power within relationships to negotiate condom use with a partner. Roberts and Kennedy (2006) surveyed an ethnically diverse sample of young ethnic college women and found “despite feeling confident in their ability to ask their partner to use a condom, over half did not refuse sex if their partner did not want to use a condom, and one third had not used a condom the last time they had sex” (p. 38).

Ellifson et al., (2010) found “older women were more opposed to the use of condoms than younger women” (p. 97). Most condom promoters target young and middle adulthood consumers, with the misperception that older adults are not at risk. To

reiterate previous findings about pleasure, older African American women believed “condom use reduces sexual pleasure” (John et al., 2015, p. 101).

### **Stigma and Embarrassment to Purchase and Use Condoms**

African American women often tolerate infidelity to maintain a relationship and despite knowledge of their partners HIV risk behaviors, many African American women defer condom use (Bowleg, Lucas, & Tschann, 2004). There is an inverse power dynamic in relationships regarding condom use. When men initiate condom use, women are more likely to comply and use condoms. However, when women initiate using a condom, men are often unwilling to use condoms. Amaro (1995) posited that in most literature:

Sexual risk behaviors (e.g., not using a condom) in both women and men are seen as the same behavior. In fact, these are distinctly different behaviors. For men, the behavior is wearing the condom; for women, the behavior is persuading the male partner to wear a condom or, in some cases, deciding not to have sex when the male partner refuses to wear a condom. (p. 440)

Researchers sampled opinions of sexual partner risks on condom use among a sample of African American women between 18 and 73 years of age (Bowleg et al., 2004; Ober et al., 2011). The women included in the study maintained, that partners’ “risk behaviors, such as having male partners, having concurrent partners, or injecting drugs, or that a partner is HIV positive, or lack of awareness of these partner risk factors, do not seem to be associated with condom use” (p. 1354).

Hood and Shook (2014) researched the degree to which 182 undergraduates’ attitudes regarding condom use were related to their beliefs about the members of the

opposite sex' condom use. The online survey results indicated that participants' attitudes about their partners' feelings toward using condoms were related to their own plans and behavior toward condoms (Hood & Shook, 2014). Results of the study indicated that attitudes toward condom use were related to an individual's perceptions of their partner's condom use intentions and behaviors thus, ultimately attitudes toward condom use affected condom use behavior.

Past research identified a negative correlation between self-esteem and high-risk behavior, such as choosing to not use condoms during intercourse (Hood & Shook, 2014). Project FAST, The Female Atlanta Study identified self-esteem and age as predictors of condom use, as older women were "less likely to use condoms than younger women" and more likely to have difficulty discussing condom use with their partners than younger women (Elifson et al., 2010, p. 98). The study included 178 heterosexual, at-risk African American women aged 18 or older.

Researchers have consistently found that older women do not favor using condoms (Elifson et al., 2010; John et al., 2015; Mallory et al., 2009; Nuendorfer, Harris, Britton, & Lynch, 2005; Smith & Larson, 2015). Older women are not in favor of using condoms because they do not perceive a need to prevent pregnancy or sexually transmitted infections. A systematic review of literature by Smith and Larson (2015) examined previous research to uncover the sexual practices of middle adulthood and older black women. As older adults are past child bearing age, their self-perception of HIV risk is minimal and many people often assume that older adults are not sexually active or are sexually active but not at risk for HIV. In actuality, older adults are sexually

active and are at increased risk for HIV because they grew up in an era where condom use was equated with birth control (Smith & Larson, 2015). The reviewed literature consisted of peer-reviewed articles including qualitative and quantitative studies over a span of 10 years that discussed HIV risk in women over 50 years of age. Behavioral, social, and psychological factors were cited as contributors to the increased number of HIV infections among older women (Smith & Larson, 2015). Social factors influencing HIV risk perception and HIV-related risk taking behaviors were poverty, high prevalence of HIV in the community, presence of mental health issues, history of substance and sexual abuse, lower self-esteem, lower self-efficacy, and lack of education.

Several studies highlighted the reality that older black women are sexually active and engaging in behaviors that increase their risk of acquiring HIV (Elifson et al., 2010; Neundorfer et al., 2005; Smith & Larson, 2015). Many older women are in relationships or marriages with partners who are unfaithful and are aware of their partner's infidelity. Because of their fear of violence, women within such relationships lack power to negotiate safer sex practices with their partner. A qualitative study by Neundorfer et al., (2005) reported "38% of older women said they engaged in unprotected behaviors to maintain their intimate relationships" (p. 64).

Conversely, Project FAST researchers found that higher self-esteem levels and coping skills equated to positive attitudes toward condom use (Elifson et al., 2010). Equally important, women with a history of multiple partners and infidelity have better communication and condom negotiation skills than women with fewer partners (Bazargan, Stein, Husaini, Bazargan, & Kelly, 2000; Cornelius & Kershaw, 2017).

Bazargan et al. (2000) surveyed a sample of African American college students to assess condom use. The study used the Information-Motivation-Behavioral skills model of AIDS preventive behavior developed by Fisher, Fisher, Williams, and Malloy. The information-motivation-behavioral skills model (IMB) was designed to examine “the roles of HIV/AIDS knowledge, experiences with and attitudes toward condom use, peer influences, perceived vulnerability, monogamy, and behavioral skills” (p. 391). The results showed that “when knowledge about HIV transmission was divided into sexual and nonsexual domains, only the knowledge about HIV transmission through sexual activities had a direct effect on condom use” (Bazargan et al., 2000, p. 400). Previous references have provided evidence that condom use is not prevalent in monogamous, long term, and heterosexual relationships (Asare, 2015; Cornelius & Kershaw, 2017; Hodder et al., 2010; Hotton, French, Hosed, Kendrick, Limos, Brothers, & Mehta, 2015; Mc Laurin-Jones et al., 2017; Woolf-King & Maisto, 2015). As condoms represent an alternative to PrEP as an HIV prevention method, understanding domains of attitudes toward condom use is important to understanding intention to use PrEP and PrEP use.

### **HIV Stereotypes**

Many African Americans do not trust the American healthcare system and have deeply held conspiracy beliefs and stereotypes regarding HIV/AIDS. Such conspiracy beliefs and stereotypes of people with HIV discourage minority participation in studies and clinical trials, reduce confidence in the U.S. healthcare system, and inhibit adoption of biomedical HIV prevention strategies. Within their manuscript, Bogart, Wagner,

Galvan, and Banks (2010) discussed beliefs and attitudes commonly held by African Americans who are typically less satisfied with health care, often doubt the effectiveness of medications, and believe that racism and discrimination are still present within the healthcare system. Using a national random sample of African American women, researchers determined that “48% believed that HIV is a manmade virus [and] 53% agreed that a cure for AIDS was being withheld from the poor” (Bogart et al., 2010, p. 648). Because such conspiracy beliefs have been associated with decreased rates of condom use and HIV testing, the history and presence of such beliefs should be acknowledged to increase condom intervention effectiveness (Bogart et al., 2010; Bogart & Thorburn, 2005; Dhalla & Poole, 2014; Hill, Patel, Haughton, & Blackstock, 2018).

With historical knowledge of HIV related conspiracy beliefs and HIV stereotypes, many African American women refuse to take part in biomedical prevention services. This refusal is often due to mistrust of medical personnel because of unethical research conducted on African Americans, “current and historical segregation, racism, and unjust treatment within the health care system and society in general” (Bogart & Bird, 2003; Bogart et al., 2010; Frew, Archibald, Martinez, Del Rio, & Mulligan, 2007; Dhalla & Poole, 2014; Hill et al., 2018).

Bogart and Bird (2003) sampled 71 African American women (aged 18 to 45 years) to examine their “beliefs and behaviors regarding birth control, HIV, and reproductive health care” (p. 1059). Most participants felt the government was withholding information about HIV/AIDS and believed people who participate in studies

and take medication like PrEP are used as human experimental subjects. Research by Bogart and Bird (2003) noted that participants' "belief in HIV/AIDS treatment conspiracies was associated with more positive attitudes toward condoms and greater likelihood of condom use in the future" (p. 1063). Interview responses revealed that African American women specifically had suspicions about new treatments for HIV. Majority of participants believed "AIDS was created by the government to control the African American population" (Bogart & Bird, 2003, p. 1052). HIV/AIDS conspiracy beliefs and the associated stereotypes related to HIV are barriers to HIV prevention efforts among African American women. Consequently, since PrEP is a medication approved by the government to prevent a highly stereotyped disease within the African American community, examining the relationship between HIV stereotypes, intention to use PrEP and PrEP use is an important component of this study.

### **HIV Knowledge**

HIV/AIDS-related knowledge is often declared as justification for HIV incidence disparities between African American women and non-African American women. More specifically, the assumption that African American women are simply not well informed about HIV risk and transmission underlies many misperceptions about HIV among African American women. Sutton et al. (2011) examined HIV knowledge related to risk perception among students attending historically black colleges and universities (HBCUs). Participants in the study exhibited average to high HIV knowledge scores; however, their perceived HIV risk was low despite participating in high-risk sexual behaviors. This low perception of HIV risk may be due to optimistic bias, whereby "an

individual engages in high-risk behaviors but underestimates his/her vulnerability to negative outcomes resulting from that behavior” (Pringle, Merchant, & Clark, 2013; Sutton et al., 2011, p. 658). Optimistic bias and lower perceived susceptibility to contracting HIV may be fueling the HIV epidemic. Even with high levels of HIV knowledge, African American women may perceive HIV/AIDS as a gay man's disease or a disease for women of low socioeconomic status and education and therefore do not accurately perceive their own susceptibility and need for behavior change.

Lindley, Coleman, Gaddist, and White (2010) examined HIV knowledge and stigma with a sample of church parishioners in South Carolina. Parishioners were knowledgeable about HIV/AIDS facts. Parishioners ages 25 to 34 had the highest HIV knowledge scores. However, parishioners over the age of 65 had the lowest scores. Within a study of African American and Caribbean women regarding HIV/AIDS knowledge, attitudes, and risk behaviors, HIV/AIDS knowledge was high between both groups (Braithwaite & Thomas, 2001). Observed in this study was the non-statistically significant relationship between sexual risk reduction behaviors and HIV/AIDS knowledge. Therefore, knowledge did not translate into practice among the respondents. Perkins, Stennis, Spriggs, Kwegyir-Afful, and Prather's (2014), quantitative study explored the relationship between HIV/AIDS knowledge and risk-taking behaviors between HIV positive and HIV negative women. Perkins et al. (2014) hypothesized that HIV/AIDS knowledge would be higher among the HIV negative women. Data showed that “the HIV positive women and negative women were equally knowledgeable about HIV/AIDS” (Perkins et al., 2014, p.3). Thus, multiple studies have provided evidence to

support that knowledge alone is not enough to impact the HIV preventive behavior of African American women (Braithwaite & Thomas, 2001; Mc Laurin-Jones et al., 2017).

### **Perceived HIV Risk**

Of all the barriers to PrEP uptake, risk perception is the most problematic as risk perception is the strongest predictor of PrEP uptake (Kwakwa et al., 2016). If African American women have a low risk perception of HIV infection, they will not adopt risk reduction behaviors. In a study of clinic attendees in Chicago, several factors were cited as influencing risky behaviors such as alcohol use, substance abuse, and the social environments effect on sexual behavior and perceived risk (Hotton et al., 2015). The researchers investigated alternatives for risk reduction and found “despite attempts to reduce risk, monogamy agreements were often not openly discussed, and intentions to practice sexual safety were not necessarily reflected in sexual behaviors” (Hotton et al., 2015, p. 672).

In 2010, 86% of new HIV infections among women across ethnicities were attributed to condomless heterosexual contact (Hodder et al., 2010). The National HIV Behavioral Surveillance Report depicts data from 7,560 heterosexual men and women who participated in the 2016 survey (Centers for Disease Control and Prevention [CDC], 2018b). Interestingly, shortcomings among participants were identified in assessing a partner’s risk among heterosexuals visiting an STI clinic as STI clinic attendees often “misjudge their partners’ past and current risk behavior and sexual exclusivity” (Hotton et al., 2015, p. 669). According to Hotton et al. (2015), assessing past sexual risk

behavior was sometimes difficult for participants and the ease of the conversation differed with the degree of the relationship. Many men and women refused to discuss sexual history with partners until they were better acquainted and chose to just use condoms with casual partners (Asare, 2015; Cornelius & Kershaw, 2017; Hotton et al., 2015).

Sociocultural norms influence sexual behaviors and negotiations within sexual relationships. The length of time that a person has been in a relationship and assumptions regarding their partner's sexual behaviors ultimately influence perceived HIV risk and often influence women to incorrectly underestimate their HIV risk. According to Cornelius and Kershaw (2017), accurate perceived HIV risks promote adoption of protective behaviors, whereas perceptions of risky sexual behaviors are often based on inaccurate information or inaccurate assumptions instead of actual conversations with romantic partners about sexual history and risky sexual behaviors.

Whiteside et al. (2011) assessed "self-perceived risk of HIV infection and attitudes about PrEP among 405 sexually transmitted disease (STD) clinic attendees in South Carolina" (p. 365). The study participants were predominantly heterosexual and only 9.4% of those surveyed had knowledge of PrEP (Whiteside et al., 2011). This study found that persons with the greatest risk for HIV actually perceived themselves at low risk and failed to protect themselves because of risk compensation (Whiteside et al., 2011). When responding to the question, "If I had to, would it be very difficult for me (or my partner) to both use condoms and take daily pills to prevent HIV infection?" males

were approximately 2.8 times as likely to have lower agreement levels compared to female participants (Whiteside et al., 2011, p. 366).

As mentioned above, participants at the highest risk for HIV infection often misperceive their level of risk at rates similar to those that had the lowest risk for HIV infection. In studies of self-perceived risk and reported risk, researchers documented inconsistencies between self-perceived HIV risk and reported HIV risk taking behaviors (Cornelius & Kershaw, 2017; Ojikutu et al., 2015; Pringle et al., 2013). The study sample included emergency room patients who were largely heterosexual with no previous history of intravenous drug use. The results showed this sample incorrectly assessed their risk of HIV infection.

According to Pringle et al. (2013), more males than females perceived themselves not at risk for contracting HIV although they reported engaging in risky behaviors. Pringle et al. (2013), maintained HIV knowledge, self-esteem, self-efficacy, religiosity, strength of support system, history of abuse, and STD history are identified factors that influence perceived risk.

A study conducted by Nunn et al. (2011) identified behaviors that increased an individual's risk for HIV. In a rapid testing program involving seven public health units in Philadelphia, "two thirds of participants with HIV and 87% of participants without HIV incorrectly assessed their HIV risk as low or none" (Nunn et al., 2011, p. 229). While the fear of acquiring HIV was a major contributor towards openness to PrEP use, participants who showed the most disinterest in PrEP use were individuals who did not recognize that they were even at risk for contracting HIV.

## **PrEP Awareness and Use**

Women are underrepresented in the scientific literature regarding PrEP and real world uptake of PrEP is low (Auerbach et al., 2015; Bailey et al., 2017; Calabrese et al., 2017; Hill et al., 2018; Ojikutu et al., 2015). Among African American women, PrEP use is low despite the disproportionately high incidence and prevalence of HIV in the African American community. PrEP's potential remains largely unknown among women because there is "no clinical trial data on efficacy among US women" (Auerbach et al., 2015, p. 102).

As reported by Hill et al. (2018), "the CDC has estimated that about 500,000 heterosexual women in the United States are eligible for PrEP based on sexual and drug use behaviors, however, data accounting for 80% of U.S. retail pharmacies that have prescribed daily oral PrEP indicated that, as of 2015, only 19,000 women had received a PrEP prescription" (p. 107). However, once PrEP is prescribed, previous research findings indicate adherence challenges with PrEP among women across ethnicities. Others barriers to PrEP uptake and continued use are safety concerns, side effects, cost effectiveness, mistrust of medical institutions, and social stigma. However, the most frequently cited for not using PrEP is a person's low perceived risk of contracting HIV (Bailey et al., 2017; Ojikutu et al., 2015; Smith, Toledo, Smith, Adams, & Rothenberg, 2012).

Wingood et al. (2013) investigated the roles of sociodemographic, behavioral, and social factors on PrEP adoption to assess their impacts on PrEP use as an HIV prevention strategy. A telephone survey of 1,500 sampled African American and Caucasians, ages

20-45 years, who were not in a relationship or married. The study found that women who were at high risk for HIV were interested in PrEP (Wingood et al., 2013). African American women were more likely to use PrEP if referred by their health care providers and also influenced by peer norms if their female friends used PrEP. Additionally, when compared to women with lower educational attainment, “women with higher educational attainment perceived themselves at lower risk for acquiring HIV and were less interested in potentially adopting PrEP” (Wingood et al., 2013, p. 5).

Although African American women are likely to adopt PrEP upon recommendation from a healthcare professional or through normative peer influences, misgivings remain among this group concerning safety, effectiveness, and probable side effects for themselves and their partners (Auerbach et al., 2015; Bailey et al., 2017; Bogart & Bird, 2003; Dhalla & Poole, 2014; Hill et al., 2018; Sarkar, 2008). African American women specifically, are influenced by subjective norms. Across studies, Prep was most widely used among African American women who felt their peers and people who were important to them would use PrEP (Amaro, 1995; Bowleg et al., 2004; Braksmajer et al., 2016; Buzi, Smith, Weinman, & Novello, 2013; Crosby et al., 2013; Schnarrs et al., 2018). A healthcare professional’s referral was also found to be a key influence in PrEP adoption among women. Physicians, therefore, are and will continue to serve an important role in HIV prevention by helping women to accurately assess their risk of contracting HIV, informing women of PrEP, and prescribing PrEP to women. There is, however, the urgency for African American women to adopt the practice of using PrEP due to the incidence and prevalence of HIV in the African American

community. The elevated incidence of HIV in the sexual networks of black women increases their actual risk of obtaining HIV, even if they are in an exclusive relationship or have a limited number of partners (Flash et al., 2014).

According to Bailey et al. (2017), PrEP is the best primary HIV prevention method currently available but is useless if people and providers are not educated about it and do not have access to it. PrEP offers a discrete form of HIV protection that does not require partner consent and can be used by both women seeking to prevent pregnancy as well as women desiring to conceive. “Health literacy as well as individual attitudes, values, preferences, and beliefs are all factors that may influence PrEP adherence, and thereby efficacy, among African American females” (Bailey et al., 2017, p. 368). The authors cited “lack of perceived risk of HIV acquisition was the main reason women are not using PrEP” (p. 368).

### **Current HIV Prevention Efforts in the United States**

Current HIV prevention efforts in the United States are multifaceted and include condom use, treatment as prevention, PrEP, and post-exposure prophylaxis (PEP). Due to the complex human factors related to disease transmission, “no single prevention intervention will halt the HIV epidemic for African American women” (Arya, Behforouz, & Viswanath, 2009, p. 1). HIV researchers have reiterated that “the epidemic in African American women is fueled by many factors, including differential access to health information; disparate health care resources and exposure to prevention interventions” (Arya et al., 2009, p. 2).

Medicinal advances in HIV prevention have increased quality of life and length of life for people with HIV but have simultaneously reduced the perceived severity of an HIV diagnosis. For African American women who are HIV positive, “highly active antiretroviral therapy (HAART) has changed HIV from a deadly disease to a chronic condition” (Deeks, Lewin, & Havlir, 2013, p. 9). HAART is a combination of drugs that reduce a patient living with HIV’ viral load (the amount of HIV in the blood) to undetectable levels, thereby preserving the health of persons living with the disease. In 1984, at the height of the HIV epidemic, patients survived an average of 18 months following diagnosis (Park, 2014). In 2011, a person living with HIV or AIDS life expectancy had increased to about 70 years (Scaccia & Madell, 2018).

While HAART has demonstrated benefits for HIV positive people and elongated life expectancies, it is not a prophylaxis for high-risk individuals who test negative for HIV. In contrast to HAART, pre-exposure prophylaxis (PrEP) is a drug prevention strategy used by HIV negative persons at risk for contracting HIV. Truvada for PrEP was approved by the United States Food and Drug Administration (FDA) in 2012 after it reduced HIV transmission by impeding viral replication after HIV enters the body (Calabrese et al., 2017; Schnarrs et al., 2018). As of 2018, Truvada is the only FDA-approved drug for PrEP in the United States. The FDA indicates that PrEP is best used “in combination with condom use and other safer sex practices to reduce the risk of sexually acquired HIV infection” (U.S. Food and Drug Administration, 2012, para. 1). Rules for the utilization of PrEP were published by the World Health Organization

(WHO) in 2012 as well as by the CDC and U.S. Public Health Service in 2014 (CDC, 2014; [WHO], 2012).

Ojikutu et al. (2018) identified PrEP as an effective biomedical prevention strategy that is not used by African Americans primarily because they are not aware of its existence. Similar to other studies, Ojikutu et al. (2018) found that participants at elevated risk for HIV identified a low risk perception as their reason for unwillingness to take PrEP. Related to low self-perceived HIV risk are factors such as “denial, lack of HIV knowledge, awareness, self-esteem, cultural beliefs, and religiosity” (Ojikutu et al., 2015, p. 3584; Rendina, Whitfield, Grove, Sterks, and Parsons, 2017; Smith et al., 2012). African American women may also defer PrEP uptake simply because they do not want to take a pill daily (Ojikutu et al., 2015).

There are inherent benefits of PrEP for both serodiscordant sexual partners and non-serodiscordant sexual partners. One direct benefit of PrEP is that it gives women an opportunity to protect themselves against HIV. Another benefit of PrEP is that it is a prevention method that can be used discreetly. PrEP is a discreet HIV prevention method because it can be taken without partner knowledge or consent, allowing women to avoid potentially awkward or difficult conversations or being forced to change their protective behaviors to accommodate their partners’ preferences (Bailey et al., 2017; Braksmajer et al., 2016; Flash et al., 2014; Willyard, 2009).

PrEP has additional indirect benefits such as a gateway to health care since maintenance visits for PrEP provide an opportunity for screening and prevention of other chronic diseases and sexually transmitted infections (Calabrese et al., 2017). Due to the

slow uptake since PrEP was approved in 2012, there is limited information on the sexual behaviors of PrEP users (Bailey et al., 2017; Calabrese et al., 2017; Hill et al., 2018; Krackower et al., 2014; Rendina, Whitfield, Grov, Starks, & Parsons, 2017). Nevertheless, PrEP users have been stigmatized especially within minority communities. In their literature review of sexual behavior change by PrEP users, Calabrese and Underhill (2015) found that health care providers, policy makers, and other stakeholders believe PrEP users engage in “increased HIV risk behavior because of a perceived decrease in susceptibility to HIV” (p. 1960). According to Calabrese et al. (2017), once PrEP users begin taking the medication, they often stop using condoms and continue engaging in high risk sexual behaviors. As an example within a recent study, 53% of patients taking PrEP reported the same amount of condomless sex at baseline as after starting PrEP, 34% reported more condomless sex after starting PrEP, and 9% reported less condomless sex seven months after starting PrEP (Calabrese et al., 2017).

Due to the lack of knowledge regarding PrEP within the general public and practitioners’ inability to identify patients who would benefit from PrEP prescriptions, PrEP has been prescribed at much lower rates than expected. Inadequate provider training is also a factor in practitioners’ low prescription rates and U.S. retail pharmacy estimates of PrEP prescriptions reiterate the reportedly low rates. In addition, the high cost of PrEP is another barrier to utilization by African American women. Without insurance, PrEP is estimated to “cost between \$8,000 and \$14,000 per year” (Braksmajer et al., 2016; Krockower & Mayer, 2015, p. 277). Although there are patient assistance programs available to help finance and offset the high cost of PrEP, consumers and other

providers remain largely unaware of PrEP resources to pay for or offset the cost of the medication.

Cordner (2017) showed that lower viral loads decrease a person's ability to spread HIV to uninfected sexual partners. PrEP is innovative and the previous generation of biomedical HIV prevention efforts primarily worked with the source of the infection to prevent the spread of HIV by viral suppression through medication adherence.

"Undetectable is Untransmittable" is an emerging and growing movement that focuses on prevention with HIV positive people, ascertaining that individuals who are compliant with their medications and maintain an untraceable viral load have no risk of spreading the HIV virus to an uninfected partner (CDC, 2017a).

### **Social Factors Influencing HIV Acquisition**

Social factors underlie African American women's widespread acquisition of the HIV virus. According to Kohler, Behrman, and Watkins (2007), "understanding the underlying causes of an individual's perception of risk and their perceptions of acceptable prevention strategies is vital to curtailing the HIV epidemic" (p. 1). There is an established relationship between educational attainment and health as "individuals with lower education levels are at increased risk of experiencing morbidity and mortality from the different diseases, unhealthy behaviors, and reduced access to health care" (HHD, 2017, p. 7).

Social networks influence perceived HIV risk and the adoption of new behaviors. Individual perception of HIV risk and their sexual partners are directly related to whether a person adopts risk reduction strategies. Kohler et al. (2007) suggested that social

networks are important venues to disseminate information about HIV prevention and risk reduction. The presence and influence of social networks underscore that individual preferences about sexual behavior are affected by the attitudes and opinions of important people within a person's social environment (Kohler et al., 2007). Kohler et al. (2007) concluded that PrEP use is influenced by behavioral, clinical, structural, and social factors.

The HIV epidemic is growing among women largely due to social and economic gender inequalities that hamper women's authority to suggest condom use and safe sex behaviors (Braksmajer et al., 2016; Davis & Tucker-Brown, 2013). Traditional gender roles can place women at elevated risk for acquiring HIV. In romantic relationships, women are less likely to initiate sexual protective behavior negotiations than men. Conversely, women with more power in relationships are more inclined to make decisions that may be contrary to their male partner's wishes.

Previous sexual trauma is also a factor contributing to HIV acquisition. Walsh, DiLillo, and Messman-Moore (2012), sampled 714 women from a university to study the relationship between prior sexual trauma and perceived HIV risk. The researchers used snippets to assess the degree to which students thought they were in a potentially unsafe sexual situation. Women who experienced prior sexual trauma took longer to judge their sexual risk and perceive abuse than women who had not experienced such trauma (Braksmajer et al., 2016; Frew et al., 2007; Walsh et al., 2012). Walsh et al. (2012), concluded that emotional struggles originating from early trauma alter the ability to articulate and appropriately deal with emotions.

Moreover, Buzi et al. (2015) studied 283 African American women who were sexually active and attending family planning clinics in the southwestern United States. The researchers used two instruments that are embedded in other surveys to gather data, the Safer Choices survey designed by Coyle, Basen-Engquist, Kirby, Parcel, Banspach, Harrist, & Weil, (1999) and the National Youth Risk Behavior Survey (CDC, 2000). The purpose of the study was to explore “demographic characteristics, perception of personal HIV risk, partner communication, social support, self-efficiency, risk behaviors, and forced sex experience” (Buzi et al., 2015, p. 113). The findings suggested that a person misunderstanding their sexual risk factors increased their likelihood of exposure to HIV through sexual contact.

In a related study examining sexual trauma and development of healthy adult sexual behaviors, Niehaus, Jackson, and Davies (2010) reported that women who experienced childhood sexual abuse had a distorted sexual self-schema, which prevented them from appropriately processing sexually relevant cues thereby making them more likely to engage in risky sexual behavior. The study included 774 college women enrolled in introductory psychology courses. To collect data, the researchers used the Modified Sexual Self-Schema Scale and Life Experiences Questionnaires. The findings revealed “childhood sexual abuse (CSA) seems to have a comprehensive effect on the sexual self-view of survivors. Survivors were more likely to view themselves as more sexually open and less conservative than non-victims, and survivors were more likely to view their sexuality negatively, associating their sexuality with descriptors such as immoral and dirty as opposed to passionate and loving” (Niehaus et al., 2010, p. 1372).

Likewise, Lacelle, Hebert, Lavoie, Vitaro, and Tremblay (2012), studied 889 young women who reported experiencing various forms of abuse. Women who experienced abuse reported involvement in risky sexual activities, sexual difficulties, and low self-confidence in contrast to women who had not experienced abuse. Thus, past sexual encounters and other social factors increased the likelihood of engaging in risk behaviors that increase the probability of contracting HIV for African American women.

### **Theoretical Frameworks Related to HIV Prevention**

Within health education and health promotion, theoretical frameworks are often viewed as essential, underlying components of HIV prevention efforts. Grounding HIV prevention efforts in one or more theoretical frameworks helps practitioners to understand the continuum of risky sexual practices and design interventions to help change behaviors. Researchers and practitioners have used a variety of theories to underpin and inform HIV prevention efforts (Asare, 2015; Buzi et al., 2015; Elifson et al., 2010; Flash et al., 2014; Frew et al., 2010; Frew et al., 2007; Simms & Byers, 2013; Traube, Holloway, & Smith, 2011).

Amaro (1995) suggested the following:

There are at least four central assumptions that should underlie any theoretical model for understanding women's sexual risk behaviors; (a) women's social status as a central feature in women's risk, (b) connection and the relational self in women's development and the fear of disconnection due to conflict as critical features in women's risk, (c) male partners as key role players in women's risk,

and (d) experience and fear of physical and sexual abuse as an important barrier to risk reduction among some women. (p. 442).

TPB is a popular model adapted from its predecessor, the TRA that has been used for decades to predict and explain human behavior. The TRA and TPB assume that human behaviors are guided by intentions, attitudes, and subjective norms. According to the theories, a person's intentions and overall HIV knowledge affect their attitudes about sexual self-efficacy, the control exerted on sexual behaviors as well as decisions regarding condom use and future sexual behaviors (Ajzen, 2011; Asare, 2015; Cornelius & Kershaw, 2017; Rendina, Whitfield, Grov, Starks, & Parsons, 2017). Intention is a strong predictor of imminent behavior, Asare (2015) found "participants who had intention to use condoms reported that they actually used them and this supports the fact that behavioral intention is a significant predictor of condom use" (p. 48).

Such behavioral intentions are centered on a person's attitude and subjective norms, defined as the person's views regarding whether significant others endorse or oppose their behavior. Perceived behavioral control, which is included in the TPB but not TRA, describes a person's perception of the ease or difficulty in performing a certain behavior (Asare, 2015; Frew et al., 2007; Schnarrs et al., 2018). Perceived behavioral control is said to "influence intentions and behaviors" (Armitage & Conner, 2001, p. 472).

In relation to the effect of perceived behavior control on intention, Ajzen (2011) stated "the relative importance of attitude, subjective norms and perceived behavioral control in predicting intention is expected to vary across behaviors and situations" (p.

472). In relation to intention, subjective norms are very important as they refer to an individual's perception of societal pressures to conform to a specific behavior. Therefore, if a person believes that other people who are important to them approve of their behavior, it is more likely that they will perform a specific behavior. Subjective norms and HIV stereotypes may contribute to higher rates of infection among African American women as this combination may lead to optimistic bias where they perceive HIV as a "gay disease."

TRA and TPB, which insist that societal beliefs regarding behaviors and norms affect a person's attitude and views' regarding what is normal, can help trace manners of sexual socialization. Unfortunately, individual-level theories fail to account for larger social aspects that influence sexual behavior. However, according to recent studies, distal influences such as socioeconomic status, education level, personal values and norms, and restrictions concerning adolescent sexuality suggest that structural dynamics contribute to an individual's risk of acquiring HIV (Flash et al., 2014; Michielsen, Chersich, Temmerman, Dooms, & Van Rossem, 2012).

The theory of gender and power (TGP) is another theory that seeks to examine and predict effective HIV interventions for women. The theory provides a framework to contextualize the sexual manifestations of low income, the risk of partner sexual history and drug use in addition to social norms, such as lack of knowledge and desire to conceive. TGP provides a framework to explain why, despite knowledge and awareness of the potential risk of unsafe sex; African American heterosexual women continue to engage in risky sexual behaviors (Elifson et al., 2010). Moreover, TGP maintains that

women lack or have less power than men to make decisions in relationships. Due to normative beliefs regarding gender roles, some women believe they are destined, expected, or supposed to be financially dependent and subservient to a man.

Flash et al. (2014) utilized the TGP as a basis for focus group discussions about HIV risk perception and acceptance of PrEP. The researchers examined socioeconomic factors such as poverty, healthcare access, perceived control, prior sexual abuse, risk perception, current preventive behavior, partner communication, social norms and lack of HIV knowledge and prevention strategies. The qualitative study explored PrEP accessibility, participants preferred setting for PrEP, reasons for PrEP use and how much their partner's opinion influence prevention decisions. Participants also identified features that would decrease utilization of PrEP (Flash et al., 2014).

### **Conclusion**

There is a need to address the lack of awareness about PrEP, the stigma of taking PrEP, and the disinterest in PrEP among African American women. African American women often underestimate their risk and susceptibility to HIV. The major barriers that inhibit PrEP uptake and use by most high risk persons are lack of information or awareness, the high cost of the drug, stigma associated with using PrEP, medication adherence once beginning PrEP, and most importantly, lack of referral by a trained physician (Krakower et al., 2014; Krakower & Mayer, 2015). Of the theories identified and discussed within this chapter, TGP is most uniquely positioned to support this study as it recognizes the sexual manifestations of low income, the risk of partner sexual

history, drug use, social norms, lack of knowledge, and women's desire to conceive. Social and economic inequities between the sexes are barriers to PrEP uptake and use because such barriers inhibit women from negotiating protective behaviors in relationships.

According to Braksmajer et al. (2016), "women in violent relationships are also less likely than non-abused women to refuse sex or use condoms during intercourse" (p. 275). It is imperative that young African American women gain insight of perceived HIV risk and the impact of prior sexual abuse to help them engage in risk reduction behaviors. It is incumbent to incorporate PrEP awareness and stigma-reduction activities into HIV prevention programming as substantial and multifaceted education around PrEP must be conducted. To reduce risk and address societal pressures that increase the chances of contracting HIV, African American women must increase their use of biomedical prevention strategies.

## CHAPTER III

### METHODOLOGY

Few studies have specifically and intentionally investigated the barriers and motivating factors of PrEP uptake and continued use among African American women. By gaining additional knowledge about factors that contribute to interest or disinterest in PrEP uptake and use, health education specialists and medical professionals will be able to develop more effective approaches to assist in PrEP uptake and encourage continued PrEP use by African American women at risk for acquiring HIV.

#### **Population Design and Sampling Procedures**

This study is a secondary data analysis of a primary study conducted by Dr. Kimberly Parker at Texas Woman's University, Denton, Texas. The original study examined attitudes toward condom use, biomedical prevention strategies, and risk associated with HIV transmission among African American cisgender women in Texas. Data were collected via an online questionnaire from women (both cisgender and transgender) who self-identified as black or African American, over the age of 18, living in Texas, or conducting health education, health promotion or medical outreach services to people who provide services for women in Texas. The final sample consisted of 258 participants who completed an online delivered, self-administered survey instrument

from July 2016 through December 2016. Participants reviewed and signed a waiver of consent that detailed the purpose of the study and their rights as a research participant. Furthermore, the survey design was descriptive and cross-sectional (Bui, Pham, Pham, & Hoang, 2001). The sample size for the primary study was calculated based on a 95% confidence interval, a 5% margin of error, and inflating the minimum sample size to account for survey non-responders.

### **Protection of Human Participants**

The Institutional Review Board on Human Subjects at Texas Woman's University, Denton, Texas, approved this secondary research study on April 6, 2018. The approval letter for this study is included within Appendix A. To protect the confidentiality of participants in the primary study, survey access was password protected. Upon conclusion of the primary survey instrument, data were stored in a computer file. For the secondary data analysis, anonymized data was transferred through Google Drive and stored on a secured USB flash drive.

### **Data Collection**

To recruit participants for this study, snowball sampling was used. Participants were recruited through health education venues and through academic departments in public health, health education, and health promotion. The selection process was based on convenience; however, recruitment measures ensured participants represented populations important to the study regarding age and sex. Study participants included African American HIV outreach workers and African American women who were not outreach workers. Eligibility criteria for non-outreach workers included identifying as an

African American woman and attending a Be-PrEPared event. The Be-PrEPared eCurriculum includes interactive online delivered modules intended to increase knowledge and awareness regarding HIV/AIDS, PrEP, HIV prevention, and other health disparities among heterosexual and transgender African American women (Parker, 2016).

The curriculum includes two online learning modules: (a) Healthy Woman (which focuses on HIV/AIDS risk and prevention, PrEP, and comprehensive health outcomes); and (b) Conducting Outreach (for providers who deliver services to women of color). Upon completing the Healthy Woman online e-Curriculum module, eligible African American women were asked to complete the questionnaire. Outreach workers were eligible to take part in the primary study if they participated in a Be-PrEPared outreach training or event or if they completed the Conducting Outreach online e-Curriculum module.

### **Instrumentation**

In the original primary study, an extensive online questionnaire including 242 items assessed demographic characteristics (age, gender, ethnicity, place of residence, education level, income, and relationship status), healthcare status, HIV testing history within the six months prior to study participation, intent to use PrEP, and self-reported PrEP use. Furthermore, the primary survey instrument included items to assess participants' HIV knowledge, sexual history, sexual behaviors, attitudes toward condom use, self-efficacy, stereotypes about AIDS, perceived risk for HIV, and intent to use biomedical prevention strategies. The original survey instrument took approximately 60

minutes to complete. This secondary analysis incorporated 85 of the 242 primary study variables. The items selected for this secondary analysis were written by the original study author, adapted from previous research, or were originally embedded within and adapted from four instruments including the UCLA Multidimensional Condom Attitudes Scale, the Stereotypes About AIDS (SAAS) Scale, the HIV-KQ-18, and the Perceived Risk of HIV Scale.

### **The UCLA Multidimensional Condom Attitudes Scale**

The UCLA Multidimensional Condom Attitudes Scale was used to measure domains of attitudes toward condom use (Helweg-Larsen & Collins, 1994). The 25-item scale assesses five independent factors associated with attitudes toward condom use: “(1) the reliability and effectiveness of condoms, (2) the pleasure associated with condom use, (3) the stigma associated with proposing or using condoms, (4) the embarrassment about negotiating and using condoms, and (5) the embarrassment about purchasing condoms” (Helweg-Larsen, & Collins, 1994, p. 162). Of this 25-item scale, all items were used in the secondary data analysis to examine participants’ multifaceted attitudes toward condom use. Internal consistency was established among a sample of UCLA undergraduate students using factor and confirmatory analyses. Cronbach’s alphas for the subscales were calculated in prior studies and were: “0.65 for reliability and effectiveness of condoms, 0.65 for pleasure associated with condom use, 0.57 for stigma associated with proposing or using condoms, 0.64 for embarrassment about negotiating and using condoms, and 0.68 for embarrassment about the purchaser” (Helweg-Larsen, & Collins, 1994, p. 230; Maisto et al., 2004; Rosengard, Anderson, & Stein, 2006). Within this

secondary study, the Cronbach's alphas for the subscales were 0.65 for reliability and effectiveness of condoms, 0.75 for pleasure associated with condom use, 0.86 for stigma associated with proposing or using condoms, 0.17 for embarrassment about negotiating and using condoms, and 0.76 for embarrassment about the purchaser factors.

### **Stereotypes about AIDS Scale**

The SAAS consists of four sections with 15 subscales and was used to measure HIV stereotypes. Negative stereotypes towards AIDS may impact a person's perceived risk of HIV transmission, use of safer sex practices, and acceptance of biomedical HIV prevention strategies.

The SAAS created by Snell, Finney, and Godwin (2011) consists of four categories of AIDS related stereotypes:

Four categories of AIDS-related stereotypes (with multiple subscales in each category) are measured by the SAAS: (a) global stereotypic beliefs about AIDS, (b) personal attitudes about AIDS, (c) medical issues about AIDS, and (d) sexual issues about AIDS. (p. 381)

Snell, Finney, and Godwin (1991) found:

For Section A (Stereotypic Beliefs About AIDS) of the SAAS, the reliabilities ranged from a low of 0.75 to a high of 0.85; for Section B (Personal Attitudes About AIDS) of the SAAS, the reliabilities ranged from 0.72 to 0.87; for Section C (Medical Issues Related to AIDS) of the SAAS, the reliabilities ranged from 0.64 to 0.83; and for the two subscales in Section D (Sexuality and AIDS) of the

SAAS, the individual Cronbach's alphas were 0.86 and 0.78, respectively (p. 354).

The 20 items from Section D were used in this secondary study to measure participants' HIV/AIDS stereotypes. Within this secondary study, all items from Section D (Sexuality and AIDS) reflected a Cronbach's alpha of 0.86.

### **HIV Knowledge**

According to Carey, Morrison-Beedy, and Johnson the original HIV-K-Q instrument measured knowledge about HIV in the following domains: transmission (vaginal, anal, and oral sexual intercourse; blood products; needle sharing; and perinatal) and non-transmission (saliva, insect bites, touching, sharing food); effective HIV prevention methods (male and female condom, abstinence, monogamy following antibody testing) and ineffective HIV prevention methods (douching, birth control pills, vaccine) and consequences of HIV infection (treatment, disease course). (1997, p. 63)

In the present study, HIV knowledge was measured with the HIV-KQ-18, an 18 question, True/False reduced version of the HIV-K-Q, the original 62-item questionnaire that measures HIV related knowledge. The streamlined questionnaire demonstrated reliability and validity when administered to participants from three diverse subsamples (primary care patients, university students, and HIV/AIDS experts) that were selected so that findings could be generalized to the larger population (Carey et al., 1997). Analyses of the HIV-KQ-18 revealed "strong levels of internal consistency and test-retest stability, with scores ranging from 0.75 to 0.89" (Carey & Schroder, 2002, p. 180). All 18

questions from the HIV-KQ-18 were used in this secondary data analysis to measure HIV knowledge. Within this study, the scale's Cronbach's alpha was 0.84.

### **Perceived HIV Risk**

The Perceived Risk of HIV Scale, a ten-item scale was used to measure perceived risk for contracting HIV based on participants' perceived vulnerability, susceptibility, and comparative calculations. The scale demonstrated reliability and content validity in a sample of 785 participants from 18 to 79 years of age who were recruited from a HIV testing center. The participants ( $N = 785$ ) were ethnically diverse with "37.1% Black, 30.9% White, 23.1% Hispanic, 4.3% Asian/Pacific Islander, 2.1% Native American, and 2.6% identified as other" (Napper, Fisher, & Reynolds, 2012, p. 1077). Sample items from this scale include: "Contracting HIV is something I have thought about, I worry about getting infected with HIV, [and] I think my chances of getting infected with HIV are lower than other women of color" (Napper et al., 2012, p. 1079). This scale is appropriate and relevant to this secondary study as the original authors determined, "higher scores on the PRHS were positively associated with a greater number of sex partners, episodes of unprotected sex, and having sex while high" (Napper et al., 2012, p. 1081). Seven items from the Perceived Risk of HIV Scale were used in this secondary data analysis to measure participants' beliefs about AIDS. With this sample of participants, the scale's overall reliability reflected a Cronbach's alpha of 0.73.

### **Intent To Use PrEP**

The dependent variable intent to use PrEP was assessed with five items adapted from previous research (Eisingerich et al., 2012). Within this study, the five items reflected a Cronbach's alpha of 0.84.

### **Research Questions**

This study sought to answer two research questions:

**Research Question 1:** How do domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risk influence intent to use PrEP among African American cisgender women?

**Research Question 2:** How do differences in domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risks vary among African American cisgender women who self-report PrEP use?

### **Study Variables**

Independent variables measured in research question one were domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risk. The dependent variable in Research Question One was intent to use PrEP. The dependent variable for Research Question One (intent to use PrEP) was measured with five items on a 4-point Likert Scale (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Agree*, 4 = *Strongly Agree*). The higher the score, the higher a participant's intent to use PrEP. In the current sample, observed scores for intent to use PrEP range from 1.00 to 4.00.

Independent variables in Research Question Two were domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risk. The dependent variable in Research Question Two was PrEP use (self-reported PrEP use). The dependent variable for Research Question Two (PrEP use) was measured by a single indicator: “I have taken PrEP, or I am currently taking PrEP, as a way to prevent HIV transmission.” The response options for this single question were (1) Yes, (2) No, and (3) Other.

Within this study, the independent variables were measured as follows. Attitudes toward condom use were measured by examining five determining influences as outlined in the UCLA Multidimensional Condom Attitudes Scale: “(1) reliability and effectiveness of condoms; (2) condom related stigma; (3) sexual pleasure associated with condom use; (4) embarrassment about use/nonuse of condoms; and (5) embarrassment of purchasing condoms” (Helweg-Larsen & Collins, 1994, p. 227). All items were measured on a 6-point Likert scale (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Slightly Disagree*, 4 = *Slightly Agree*, 5 = *Agree*, 6 = *Strongly Agree*). The higher the attitudes toward condom use on each dimension, the higher a woman’s confidence in her partner using a condom. For this secondary study, the domains were intentionally not summed because “condom attitudes are multidimensional and thus cannot meaningfully be summed to a single global score” (Helweg-Larsen & Collins, 1994, p. 224). In the current sample, mean scores observed for reliability and effectiveness of condoms range from 1.80 to 6.00; mean scores observed for condom related stigma range from 1.57 to 6.00; mean scores observed for sexual pleasure associated with condom use range from 1.40 to

6.00; mean scores observed for embarrassment of purchasing condoms range from 2.00 to 6.00, and mean scores observed for embarrassment about use/nonuse of condoms range from 2.00 to 6.00.

Moreover, 20 survey items were adapted and used from the Stereotypes About AIDS Scale to measure the independent variable HIV stereotypes. All items were measured on a 5-point Likert scale (-2 = *Strongly Disagree*, -1 = *Disagree*, 0 = *Neither Disagree or Agree*, 1 = *Strongly Agree*, 2 = *Agree*). A mean scale was created for HIV stereotypes using the items of interest. Higher scores indicated more positive HIV stereotypes. In the current sample, mean observed scores for HIV stereotypes range from -1.00 to 1.45.

Likewise, 18 survey items were used to measure the independent variable HIV knowledge. Mean scale scores were recoded to reflect (0 - 0.24 = 1) (0.25 - .44 = 2) (0.45 - .64 = 3) (0.65 - .84 = 4) (0.85 - 1 = 5) a five-point scale. This was done to facilitate interpretation as the lower the value on the HIV knowledge scale indicated lower HIV knowledge and the higher the value higher HIV knowledge. The higher the score, the higher HIV knowledge.

Seven survey items measured perceived HIV risk. The seven items were measured using a 4-point Likert scale (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Agree*, 4 = *Strongly Agree*) and a mean scale was created for perceived HIV risk using the items of interest. Higher perceived HIV risk scores indicate a higher perception that contracting HIV is possible. In the current sample, mean observed scores for perceived HIV risk range from 1.43 to 4.00. All independent, dependent, and demographic variables of

interest, questionnaire items used to measure each variable, and item response option codes are included in Table 1.

Table 1

*Questionnaire Items for the Analytic Variables*

Variable	Questionnaire Items
Dependent Variables	
Intent to use PrEP	<p>The following five items were measured on a 4-point Likert scale: (1 = <i>Strongly Disagree</i>, 2 = <i>Disagree</i>, 3 = <i>Agree</i>, 4 = <i>Strongly Agree</i>).</p> <ol style="list-style-type: none"> <li>1. I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV.</li> <li>2. I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV if it were available.</li> <li>3. I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV if I could afford it.</li> <li>4. I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV if it caused mild temporary side effects.</li> <li>5. I would share information about biomedical HIV prevention strategies such as PrEP to others in my community.</li> </ol>
PrEP Use	<p>I have taken PrEP, or I am currently taking PrEP as a way to prevent HIV transmission. Measured as 1 = Yes, 1 = Other, and 0 = No.</p>
Independent Variables	
Attitudes toward condom use	<p>The following 20 items were measured on a 6-point Likert scale: (1 = <i>Strongly Disagree</i>, 2 = <i>Disagree</i>, 3 = <i>Slightly Disagree</i>, 4 = <i>Slightly Agree</i>, 5 = <i>Agree</i>, 6 = <i>Strongly Agree</i>).</p>
a) Condoms are effective and reliable	<ol style="list-style-type: none"> <li>1. Condoms are an effective method of preventing the spread of AIDS and other sexual transmitted diseases.</li> <li>2. Condoms are unreliable.</li> </ol>

3. I think condoms are an excellent means of contraception.
  4. Condoms do not offer reliable protection.
  5. Condoms are an effective method of HIV prevention.
- b) Condom related stigma
1. It is really hard to bring up the issue of using condoms to my partner.
  2. Women think men who use condoms are jerks/unfaithful.
  3. If a couple is about to have sex and the man suggests using a condom, it is less likely that they will have sex.
  4. People who suggest condom use are a little bit geeky.
  5. I'm comfortable talking about condoms with my partner.
  6. Men who suggest using a condom are really boring
  7. A woman who suggests using a condom does not trust partner.
1. Use of a condom is an interruption of foreplay.
  2. Condoms ruin the sex act.
- c) Condoms are for pleasure
3. Condoms are a lot of fun.
  4. The use of condoms can make sex more stimulating.
  5. Condoms are uncomfortable for both parties.
1. I always feel really uncomfortable when I buy condoms.
  2. When I suggest using a condom I am almost always embarrassed.
- d) Embarrassed to purchase condoms
3. I think condoms are an excellent means of contraception.
  4. I don't think that buying condoms is awkward
  5. It is very embarrassing to buy condoms.
  6. It would be embarrassing to be seen buying condoms in a store.
  7. When I need condoms, I often dread having to get them.

1. Condoms are unreliable and thus I am embarrassed.
- e) Embarrassed to use condoms    2. It is easy to suggest to my partner that we use a condom
3. I never know what to say when my partner and I need to talk about condoms or other protection.
- HIV Stereotypes    The following 20 items were measured on a 4-point Likert scale: (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Agree*, 4 = *Strongly Agree*).
1. HIV infection is a serious challenge to the notion of recreational sex.
2. Because of HIV infection, everyone has a responsibility to practice healthful sexual behaviors.
3. Condoms offer protection against the spread of HIV infection.
4. HIV infection cannot be transmitted by heterosexual (male-female) sexual activity.
5. People can get HIV infection from their sexual partners.
6. The more sexual partners people have, the greater their chance of contracting HIV infection.
7. HIV infection is associated with multiple anonymous sexual contacts.
8. HIV infection is transmitted by intimate sexual contact.
9. People can contract HIV infection even though they have had sex with only one person.
10. Condoms are a safe shield against HIV infection.
11. HIV infection is essentially a sexually transmitted disease.
12. People can contract HIV infection from sexual contact with a single infected person.
13. Any sexually active person can get HIV infection.
14. People get HIV infection from sex.

15. People don't engage in sex very much nowadays because of HIV infection.
16. HIV infection is transmitted primarily through sexual relations.
17. Proper use of condoms can reduce the risk of contracting HIV infection.
18. The use of condoms can prevent the spread of HIV infection.
19. Heterosexuals who use condoms can lessen their risk for getting HIV infection.
20. People who have "one-night stands" will probably contract HIV infection.

HIV Knowledge

*The following 18 items were measured dichotomously with 0 = No and 1 = Yes.*

1. Coughing and sneezing DO NOT spread HIV, or the virus that causes AIDS.
2. A person can get HIV by sharing a glass of water with someone.
3. Pulling out the penis before a man climaxes/ejaculates/cums keeps a woman from getting HIV during sex.
4. A woman can get HIV if she has anal sex with a man.
5. Showering, or washing one's genitals/private parts, after sex keeps a person from getting HIV.
6. All pregnant women infected with HIV will have babies born with AIDS.
7. People who have been infected with HIV quickly show serious signs of being infected.
8. There is a vaccine that can stop adults from getting AIDS.
9. People are likely to get HIV by deep kissing, putting their tongue in their partner's mouth, if their partner has HIV.
10. A woman cannot get HIV if she has sex during her period.

11. There is a female condom that can help decrease a woman's chance of getting HIV.
12. A natural skin condom works better against HIV than does a latex condom.
13. A person will NOT get HIV if she or he is taking antibiotics.
14. Having sex with more than one partner can increase a person's chance of being infected with HIV.
15. Taking a test for HIV one week after having sex will tell a person if she or he has HIV.
16. A person can get HIV by sitting in a hot tub or swimming pool with a person who has HIV.
17. A person can get HIV from oral sex.
18. Using Vaseline or baby oil with condoms lowers the chance of getting HIV.

Perceived HIV  
Risk

The following seven items were measured on a 4-point Likert scale: (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Agree*, 4 = *Strongly Agree*).

1. I worry about getting infected with HIV.
2. I think my chances of getting infected with HIV are
3. Contracting or getting HIV is something I have thought about.
4. I feel vulnerable to HIV infection.
5. My risk for getting infected with HIV is lower than those in my community.
6. My risk for getting infected with HIV is lower than those that are close to me (i.e. friends, peers).
7. My risk for getting infected with HIV is lower than other women of color.

Demographic Variables

Age

Age in years

education	Education was measured by level of education with the following responses: 1 = K-8 grade, 2 = 9-11 grade, 3 = High school graduate/GED, 4 = Technical/Vocational or Associate's, 5 = Bachelor's degree, 6 = Master's degree, 7 = Doctorate/Medical/Professional Degree. Responses recoded to 1 = Bachelor's degree or higher, and 0 = less than Bachelor's degree.
employment status	Employment was measured by: 1 = Employed full time, 2 = Part-time, 3 = College Student, 4 = Unemployed, 5 = Other. Responses recoded to 1 = Full-time employment and 0 = Not full time employment.
household income	Income was measured by: 1 = Less than \$20,000, 2 = \$20,000-\$40,000, 3 = \$40,000-\$60,000, 4 = \$60,000-\$80,000, 5 = \$80,000-\$100,000, 6 = More than \$100,000. Responses were recoded to 1 = Above \$60,000 and 0 = below \$60,000.
healthcare	Healthcare location status was measured by: 1 = Healthcare provider office, 2 = Community clinic or health center, 3 = Hospital, 4 = Prison clinic, 5 = Other. Responses were recoded to 1 = Healthcare provider office, 2 = Community clinic or health center, and 3 = Hospital/Prison clinic/Other.
HIV test in last 6 months	HIV testing status was measured by: 1 = Yes, 2 = No, 3 = I don't know, 4 = I do not wish to answer.
Serodiscordant relationship	Serodiscordant relationship status was measured by: 1 = Yes, 2 = No, 3 = I don't know, 4 = I do not wish to answer.

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### **Data Analysis**

Permission was obtained from the primary investigator of the original study to extract and analyze specific variables from the dataset. Selected data were exported to IBM SPSS version 25 for analysis. Descriptive and inferential analyses were conducted. The inferential statistical tests (ordinal regression and logistic regression) were intentionally selected for this study based on the variable characteristics, relationships of interest, and differences tested between the independent and dependent variables.

### **Ordinal Regression**

To answer the first research question, ordinal regression analysis was performed as the first outcome (was a Likert scale with four categories (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Agree*, 4 = *Strongly Agree*). The author presents each predictor's corresponding unstandardized regression coefficient ( $\beta$ ), standard error (SE), and *p*-value. Model 1 was unadjusted with the independent variables. Model 2 was adjusted with the demographic variables, HIV test in last six months status, and serodiscordant relationship status.

### **Logistic Regression**

To answer the second research question, logistic regression was utilized as the dependent variable was dichotomous. Presented are each predictor's corresponding odds ratio, 95% confidence intervals, and *p*-value. Model 1 was unadjusted with the independent variables. Model 2 was adjusted with the demographic variables, HIV test in last six months status, and serodiscordant relationship status.

## CHAPTER IV

### RESULTS

Independent and dependent variables for this quantitative study were measured and analyzed to assess the differences in the domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risks among African American cisgender women who self-report PrEP use and those who do not. Additionally, the study investigated the relationship between domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, perceived HIV risks and the intent to use PrEP among African American cisgender women. Descriptive and inferential statistics were obtained employing IBM's SPSS version 25.

#### **Final Sample and Descriptive Statistics**

The secondary data analyzed for this study were extracted from the Be-PrEPared questionnaire dataset. The original data were collected online from July 2016 through December 2016. Data were collected from 258 African American cisgender or transgender women, over the age of 18, who resided in Texas and who were identified using the snowball sampling procedure. Participants were recruited across community events, health education venues, and historically black colleges and universities.

Moreover, the sample was further described by their education level, income and relationship status. Of the study participants, 19.8% ( $n = 51$ ) earned a High School/GED diploma. Among participants, 45.5% ( $n = 117$ ) reported they completed technical or

vocational education. Of the female participants, 27.6% ( $n = 71$ ) earned a Bachelor's degree, and 5.8% ( $n = 15$ ) completed a Master's degree. Finally, 1.2% ( $n = 3$ ) of the respondents earned a Ph.D., M.D., or other professional degree prior to study commencement. In contrast to sexual behavior studies conducted with samples of undergraduate students pursuing four-year college degrees, this study primarily included women who had not completed a four-year college degree. When the present study was conducted, most participants (65.1%,  $n = 168$ ) reported high school or an associate's degree as their highest level of completed education.

Regarding the female participants' household income level, 18.2% ( $n = 47$ ) earned less than \$40,000.00. Slightly over one third, 38.0% ( $n = 98$ ) of female participants earned between \$40,000.00 and \$80,000.00. Conversely, 36.8% ( $n = 95$ ) of female participants earned more than \$80,000.00. Additionally, 41.1% ( $n = 106$ ) of female participants were married or had a partner and 36.8% ( $n = 95$ ) were single. Approximately one fifth of participants, 21.7% ( $n = 56$ ) of participants were in a relationship. In contrast to prior sexual behavior studies including samples of African American women, this study primarily included women who earned more than \$40,000.00 yearly.

Furthermore, the female participants were asked one question to assess their HIV testing history within the six months preceding study participation. Most participants (61.6%,  $n = 159$ ) reported not having been tested for HIV in the past six months and 36.0% ( $n = 93$ ) reported having an HIV test in the past six months. Three respondents said they did not know if they had an HIV test and two respondents chose not to answer

the question. Participants were asked one question to if they were in a serodiscordant relationship. Most participants 85.3% ( $n = 22$ ) indicated they were not in a serodiscordant relationship at the time of study participation while 14.7% ( $n = 38$ ) reported being in a serodiscordant relationship.

Likewise, the African American female respondents were asked if they were currently taking PrEP as a way to prevent HIV transmission. Approximately half of the participants (52.5%,  $n = 155$ ) reported not taking PrEP while 41.5% ( $n = 107$ ) of participants reported taking PrEP. One respondent indicated “other” and there were 16 missing cases for this variable.

### **Correlation Matrix**

A correlation matrix (see Table 2) was constructed for all variables of interest to check for multicollinearity. Correlations were inspected for evidence of inappropriately high correlations (0.70 or higher) between predictors which may indicate a possible problem of multicollinearity. The primary researcher determined there were no issues with multicollinearity among this study’s variables of interest.

Table 2

*Correlation Matrix for all Study Variables*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	-																
2	.091	-															
3	.312***	-.172**	-														
4	-.228**	-.435**	.212**	-													
5	-.262**	-.248**	.100	.740**	-												
6	-.075	-.314**	.401**	.752**	.646**	-											
7	.076	-.301**	.508**	.657**	.452**	.556**	-										
8	-.243**	.104	-.384**	.035	.198**	-.086	-.165*	-									
9	-.314**	-.443**	.175**	.780*	.655**	.596**	.441**	-.004	-								
10	.452**	.235**	.176*	-.470**	-.472**	-.312**	-.171*	-.150*	-.556**	-							
11	.037	.032	-.115	-.196**	-.197**	-.149*	-.207**	.127	-.158*	.015	-						
12	-.221**	.000	-.182**	.156*	.221**	.160*	-.063	.240**	.244**	-.187**	.228**	-					
13	.102	.295**	-.136*	-.460**	-.346**	-.334**	-.249**	.001	-.476**	.277**	.397**	.029	-				
14	.288**	.317**	-.048	-.639**	-.566**	-.399**	-.393**	-.073	-.622**	.444**	.367**	-.014	-	-			
15	-.180**	-.178**	-.040	.316**	.201**	.150*	.155*	.081	.229**	-.233**	.172**	.199**	.051	-.210**	-		
16	.191**	-.053	.036	-.303**	-.399**	-.279**	-.087	-1.20	-.338**	.272**	.116	-.354**	.283**	.264**	-.049	-	
17	-.057	.167**	-.099	-.126	.089	.043	-.173**	.049	.047**	-.143*	.186**	.250**	-.107	.065	-.030	-.435**	-

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

1 = Intent to use PrEP	11 = age
2 = Self-reported PrEP use	12 = education
3 = Condoms are effective and reliable (6-point scale)	13 = employment status
4 = Condom related stigma (6-point scale)	14 = household income
5 = Condoms are for pleasure (6-point scale)	15 = healthcare location status
6 = Embarrassed to purchase condoms (6-point scale)	16 = HIV test in last 6 months status
7 = Embarrassed to use condoms (6-point scale)	17 = serodiscordant relationship status
8 = HIV Stereotypes (4-point scale)	
9 = HIV knowledge (5-point scale)	
10 = Perceived HIV risk (4-point scale)	

## **Examination of Null Hypotheses**

H<sub>01</sub>: There is no statistically significant relationship in domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, perceived HIV risk, and intent to use PrEP among African American cisgender women.

### **Intent to Use PrEP**

Table 3 shows the ordinal regression estimates predicting intent to use PrEP among African American cisgender women who participated in the primary study. The author of this secondary study used the model fit statistics to determine the best fitting model. When comparing model  $\chi^2$  values, the larger the value indicates a better fit so the primary author chose Model 2. When comparing Pseudo  $R^2$  values, the larger the value additionally indicates a better fit so Model 2 with .422 is the best fitting model. All the predictor variables explain 42.2% of the variation in the likelihood of intent to use PrEP among African American cisgender women.

For unadjusted analyses, there was a statistically significant association between the condoms are effective and reliable dimension and intent to use PrEP. For each unit increase in the condom are effective and reliable dimension, the logged odds of having higher intent to use PrEP increase by .395 (SE = .196,  $p < .05$ ). For each unit increase in the embarrassed to use condoms scale, the logged odds of having higher intent to use PrEP increase by .248 (SE = .209,  $p < .05$ ). For each unit increase in the perceived HIV risk scale, the logged odds of having higher intent to use PrEP will increase by .479 (SE = .239,  $p < .05$ ). For adjusted analyses, for each unit increase in the embarrassed to purchase condoms scale, the logged odds of having higher intent to use PrEP will

increase by .539 (SE = .254,  $p < .05$ ). For each unit increase in the perceived HIV risk scale, the logged odds of having higher intent to use PrEP will increase by .540 (SE = .254,  $p < .05$ ).

Table 3

*Ordinal Regression Estimates Predicting Intent to Use PrEP among African American Women*

Predictor	Unadjusted $\beta$ (SE)	Adjusted $\beta$ (SE) <sup>a</sup>
Attitudes toward condom use		
Condoms are effective and reliable (6-point scale)	.395 (.196)*	.390 (.215)
Condom related stigma (6-point scale)	-.382 (.248)	-.406 (.270)
Condoms are for pleasure (6-point scale)	-.075 (.174)	.078 (.193)
Embarrassed to purchase condoms (6-point scale)	.575 (.235)	.539 (.254)*
Embarrassed to use condoms (6-point scale)	.248 (.209)*	.381 (.228)
HIV Stereotypes (4-point scale)	-.096 (.220)	-.191 (.245)
HIV Knowledge (5-point scale)	-.249 (.151)	-.132(.167)
Perceived HIV risk (4-point scale)	.479 (.239)*	.540 (.254)*
-2 log likelihood	208.49	210.09
Model $\chi^2$	50.55***	61.39***
Pseudo R <sup>2</sup>	.361	.422
N	135	135

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

$\beta$  = unstandardized regression coefficient; SE = standard error

<sup>a</sup>After controlling for age, education, employment status, household income, healthcare location status, HIV test in last 6 months status, and serodiscordant relationship status

## **Examination of Null Hypotheses**

HO2: There is no statistically significant relationship in domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, perceived HIV risk and PrEP use among African American cisgender women

### **PrEP Use**

To determine the best fitting model the primary author considered the model fit statistics presented in Table 4. When considering the -2 likelihood for Model 1 (137.97) and Model 2 (122.35), the smaller the value for Model 2 indicates the best fitting model. Regarding the models'  $\chi^2$  values, the larger the value indicates a better fit so Model 2 is chosen. When comparing the Pseudo  $R^2$ , larger values indicate a better fit, so Model 2 with .451 is the best fitting model. All the predictor variables explain 45.1% of the variation in the likelihood of self-reported PrEP use.

For unadjusted analyses, each unit increase in the condoms are for pleasure dimension increases the predicted logged odds of PrEP use by 2.330,  $p < .05$ , 95% CI [1.186, 4.578]. For each unit increase in HIV knowledge score, the probability of PrEP use increases by 47.8%,  $p < .05$ , 95% CI [.276, 0.828]. For adjusted analyses, for each unit increase in HIV knowledge scale, the probability of PrEP use increases by 39.0%  $p < .01$ , 95% CI [.196, 0.779].

Table 4

*Logistic Regression Estimates Predicting Self-Reported PrEP Use among African American Women*

Predictor	Unadjusted OR (95% CI)	Adjusted OR (95% CI) <sup>a</sup>
Attitudes toward condom use		
Condoms are effective and reliable (6-point scale)	.845 (.424, 1.686)	.916 (.409, 2.055)
Condom related stigma (6-point scale)	.785 (.345, 1.786)	1.062 (.402, 2.809)
Condoms are for pleasure (6-point scale)	2.330 (1.186, 4.578)*	1.857 (.845, 4.083)
Embarrassed to purchase condoms (6-point scale)	.565 (.259, 1.230)	.440 (.175, 1.111)
Embarrassed to use condoms (6-point scale)	.741 (.371, 1.478)	.745 (.321, 1.730)
HIV Stereotypes (4-point scale)	.761 (.343, 1.688)	.986 (.396, 2.457)
HIV knowledge (5-point scale)	.478 (.276, .828)*	.390 (.196, .779)**
Perceived HIV risk (4-point scale)	1.232 (.564, 2.695)	1.482 (.628, 3.498)
-2 log likelihood	137.97	122.35
Model $\chi^2$	36.42***	52.04***
Pseudo R <sup>2</sup>	.335	.451
N	258	258

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

OR=odd ratios; CI=confidence intervals

<sup>a</sup>After controlling for age, education, employment status, household income, healthcare location status, HIV test in last 6 months status, and serodiscordant relationship status

## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

The primary purpose of this study was to determine if differences existed between domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risk between African American cisgender women residing in the state of Texas who take PrEP and those who do not. Additionally, this study examined the levels between domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, perceived HIV risks and the intent to use PrEP among African American cisgender women.

Among African American cisgender women, PrEP use is low despite the disproportionately high incidence and prevalence of HIV in the African American community. PrEP is an effective biomedical prevention strategy inhibiting HIV transmission. There is, however, the urgency for African American cisgender women to adopt the practice of using PrEP due to the perpetually elevated rate of HIV among African Americans. According to Ojikutu et al. (2015), “available data from pharmacies that prescribe PrEP suggest that about 10% of those who could benefit have initiated PrEP, and that black individuals in particular, are not accessing this biomedical intervention” (p. 576). Identified barriers to using PrEP include unawareness of PrEP and its availability, low HIV risk perception, competing life priorities, high cost for PrEP

medication continued use, non-compliance due to social issues, stigma associated with PrEP use, mistrust of medical institutions, and practitioner disclosure issues related to sexual behaviors.

Secondary data analyzed for this descriptive study were extracted from the Be-PrEPared questionnaire dataset. The original data were collected online through the Psych data survey software from July 2016 through December 2016. Data collected from this study were from 258 African American cisgender or transgender women over the age of 18 residing in Texas. All participants identified as African American women and were recruited across community events, health education venues, and historically black colleges and universities using snowball sampling procedures.

Independent variables measured in research question one were: domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risk. The dependent variable in research question one was intent to use PrEP. The independent variables in research question two were: domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risk. The dependent variable in research question two was self-reported PrEP use.

Ordinal regression analysis was performed to answer the first research question. To determine the best fitting model, the model fit statistics were used. When looking at the model  $\chi^2$  values, the larger value indicated a better fit, so Model 2 was chosen. When looking at the Pseudo  $R^2$  the larger the value additionally indicated a better fit, so Model 2 with .422 is the best fitting model. All the predictor variables explained 42.2% of the variation in the likelihood of intent to use PrEP among African American cisgender

women. Next, because the dependent variable was dichotomous, the primary author used logistic regression to answer the second research question. A statistically significant relationship was identified between HIV knowledge and PrEP use. There was not a statistically significant relationship observed between any other independent variables when taking covariates into account. All the predictor variables explained 45.1% of the variation in the likelihood of PrEP use among African American cisgender women in this study.

### **Testing of Hypotheses**

The present study tested two statistical (null) hypotheses formulated to address the research questions within this study.

Ho<sub>1</sub>: There is no statistically significant relationship in: domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risk and the intent to use PrEP among African American cisgender women.

Ho<sub>2</sub>: There is no statistically significant relationship in: domains of attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risk and PrEP use among African American cisgender women.

Regarding null hypothesis one, a statistically significant relationship was identified between “embarrassed to purchase condoms” and intent to use PrEP among African American cisgender women. There was a statistically significant association between perceived HIV risk and intent to use PrEP among African American women. There was not a statistically significant relationship between any other independent variables when taking into account covariates. All the predictor variables explained

42.2% of the variation in the likelihood of intent to use PrEP among African American cisgender women. Regarding null hypothesis two, a statistically significant relationship was identified between HIV knowledge and PrEP use among African American women. There was not a statistically significant relationship between any other independent variables when taking into account covariates. All the predictor variables explained 45.1% of the variation in the likelihood of PrEP use among African American cisgender women. Refer to Tables 5 and 6 to examine which null hypotheses were rejected.

Table 5

*Summary of Hypothesis Testing for  $H_{01}$*

Specific Test	Conclusion
<b><math>H_{01}</math>: Intent to Use PrEP</b>	
Attitudes toward condom use	
Condoms are effective and reliable (6-point scale)	Fail to Reject
Condom related stigma (6-point scale)	Fail to Reject
Condoms are for pleasure (6-point scale)	Fail to Reject
Embarrassed to purchase condoms (6-point scale)	Reject
Embarrassed to use condoms (6-point scale)	Fail to Reject
HIV Stereotypes (4-point scale)	Fail to Reject
HIV Knowledge (5-point scale)	Fail to Reject
Perceived HIV Risk (4-point scale)	Reject

Table 6

*Summary of Hypothesis Testing for H<sub>02</sub>*

Specific Test	Conclusion
<b>H<sub>02</sub>: PrEP use</b>	
Attitudes toward condom use	
Condoms are effective and reliable (6-point scale)	Fail to Reject
Condom related stigma (6-point scale)	Fail to Reject
Condoms are for pleasure (6-point scale)	Fail to Reject
Embarrassed to purchase condoms (6-point scale)	Fail to Reject
Embarrassed to use condoms (6-point scale)	Fail to Reject
HIV Stereotypes (4-point scale)	Fail to Reject
HIV Knowledge (2-point scale)	Reject
Perceived HIV Risk (4-point scale)	Fail to Reject

**Discussion**

One of the most of interesting findings of the present descriptive study was the positive relationship identified between perceived HIV risk and intent to use PrEP among African American cisgender women. The observed positive relationship between perceived risk and intent to use PrEP was consistent with the findings of Bailey et al. (2017), Flash et al. (2014), Kwakwa et al. (2016), and Wingood et al. (2013). Each separate research team identified a statistically significant relationship between intent to use PrEP and African American women's perceived HIV risk. A plausible explanation for these replicated findings may be that African American women are more likely to

adopt risk reduction strategies to initiate protective sexual behaviors because of their perception of high-risk status for contracting HIV than women from other ethnic groups. It is the researcher's evidence-informed belief that similar to literature, some participants in the current study at the highest risk for acquiring HIV perceive their level of risk at rates similar to those who have the lowest risk for HIV infection. This tendency to inaccurately assess personal risk correlates with the findings of Pringle et al. (2013) who stated "multiple studies have documented inconsistencies between self-perceived HIV risk and reported HIV risk taking behaviors, while others have reported varying levels of congruency, which has led to no clear consensus as to how well people can assess their own HIV risk" (p. 574). Accurate assessment of HIV risk may preclude and help women initiate protective sexual behaviors. In the current study, women who self-reported PrEP use realistically perceived their HIV risk and adopted PrEP as a strategy to prevent contracting HIV.

Another notable finding of this study was the non-significant association identified between the attitudes of African American cisgender women toward condom use and intent to use PrEP. In the current study, women who held positive attitudes toward condoms were less likely to use PrEP. Results revealed that on average, PrEP users "disagreed" that condoms were pleasurable and women who did not report PrEP use only "slightly agreed" that condoms were pleasurable. Such a finding is problematic because as Crosby et al. (2013) reported "African American women who report condoms having a negative effect on sexual pleasure and who experience sexual difficulties in general are more likely to engage in sexual risk behavior" (p. 866). The women who

reported using PrEP accurately perceived their HIV risk level and are taking PrEP to prevent contracting the disease. Regarding embarrassment to purchase and use condoms, participants who self-reported PrEP use “disagreed” about embarrassment to use and purchase condoms. However, women who did not use PrEP and instead preferred to use condoms for HIV prevention slightly agreed that purchasing and using condoms was embarrassing. The findings within this present study contradict findings by Asare (2015), Deutsch et al. (2015), and Elifson et al. (2010). In their respective research findings, each research team found that intention to use PrEP was a statistically significant predictor of favorable attitudes toward condom use.

Also, within this study a statistically significant relationship was identified between HIV stereotypes and attitudes toward condom use. Conspiracy beliefs and stereotypes rooted in medicine has been and can be a barrier to wider adoption of biomedical prevention strategies, preventive behaviors, testing, treatment, and public health promotion activities especially within the African American community. According to Bogart and Thoburn (2005), when compared with African Americans who do not endorse conspiracy beliefs or stereotypes, “African Americans who endorse conspiracy beliefs or stereotypes held more positive attitudes about using condoms and had greater intention to use them at next intercourse” (p. 217).

African Americans’ historical mistrust of the healthcare system stems from the Tuskegee study where treatment was intentionally held back from African American men for forty years to study the disease progression of syphilis. Across studies and across participant samples, believing in conspiracy theories and stereotypes regarding

HIV/AIDS has been related to more positive or favorable attitudes toward condoms (Bogart & Bird, 2003; Bogart & Thorburn, 2005; Bogart et al., 2010). According to Bogart and Thorburn (2005) “individuals who do not trust new treatments for HIV may be motivated to use condoms in order to avoid those treatments and any contact with healthcare providers” (p. 217). These findings paralleled previous research findings by Bogart and Bird (2003). In the present study, this pattern holds as women who reported higher levels of negative HIV stereotypes were less likely to report using PrEP. A possible explanation for the current findings could be attributed to Ojikutu et al. (2018), who opined, “historical and ongoing oppression and racism have led to mistrust of the U.S. government, the healthcare system, health care providers, and HIV conspiracy beliefs within the black community” (p. 3577). In addition to the discussion surrounding HIV stereotypes and conspiracy beliefs, an additional plausible explanation of African American women’s perception of biomedical prevention is they fear “potential complexities related to taking PrEP, such as side effects, access, duration and frequency of use, relative efficacy, affordability, accessibility, and prevention of other STI’s” (Goparaju et al., 2015, p. 17).

The correlation between HIV stereotypes and intent to use PrEP among African American women is interesting because there is no correlation between HIV stereotypes and actual self-reported PrEP use. The difference between behavioral intention and a person’s actual behavior has long been debated among health behavior professionals and this discrepancy provides an ideal area for future exploration.

Contrary to expectation in the present study were the relationships identified between HIV knowledge and both intent to use PrEP and self-reported PrEP use. A significant positive correlation was identified between PrEP use and HIV knowledge among African American cisgender women. Both groups showed average to high HIV knowledge scores. These results match those observed in earlier studies of high-risk African American women who expressed interest in PrEP. This result may be explained by the fact that African American cisgender women surveyed in the present study were knowledgeable of HIV/AIDS and HIV risk factors and therefore used PrEP to reduce their risk of infection or that the women taking PrEP learned more about HIV/AIDS through informational materials and conversations with their healthcare provider.

One unanticipated finding was the difference in HIV knowledge between African American cisgender women users of PrEP and non-users of PrEP. African American women who reported not using PrEP had a significantly higher mean HIV knowledge score than their PrEP using counterparts. Moreover, somewhat of a surprising finding pertained to the statistically significant difference found between African American women PrEP users and African American women PrEP non-users' attitudes toward condom use. Interestingly, PrEP users had more favorable attitudes regarding condom stigma, embarrassment to purchase and use condoms than women who had not used PrEP within the present study. However, on average, women who used PrEP did not feel condoms were pleasurable. These findings were consistent with those of Calabrese et al. (2017), who found that users of PrEP did not have favorable attitudes toward condoms.

Conversely, participants in this study who held favorable attitudes toward condom pleasure were less like to use PrEP.

Finally, an additional notable finding of the study included statistically significant relationships between perceived HIV risk and intent to use PrEP among African American cisgender women (both users and non-users). Although the current study includes a small sample of participants, the findings suggest African American women PrEP users; perceive their HIV risk whereas non-users of PrEP may not. These findings reiterate findings from Whiteside et al. (2011) and Kwakwa et al. (2016) regarding risk and PrEP use. A rational explanation for these findings is attributed to the amount of information African American women PrEP users have received concerning HIV transmission risk factors during the consultation and prescription process. By engaging in consultations with healthcare personnel to discuss and obtain PrEP for HIV prevention, African American women who reported using PrEP have gained more knowledge concerning HIV risk factors than non-users. Hence, women who reported using PrEP possessed more favorable perceptions of PrEP to reduce HIV risk than their non-user peers.

## **Implications**

### **Implications for Health Educators**

The positive relationships identified between perceived HIV risk, embarrassment to purchase condoms, and intent to use PrEP among African American women provide implications for health educators who serve as resource providers. Initially, the findings suggest to health professionals, particularly those who are responsible for discussing and

prescribing biomedical prevention strategies like PrEP, that there is a need for the development of comprehensive programs to educate women about HIV/AIDS, prevention options, HIV resources, and referrals to local PrEP providers.

This study most closely supports Area II (Plan Health Education/Promotion), Area III (Implement Health Education/Promotion), and Area IV (Conduct Evaluation and Research Related to Health Education/Promotion) of the Seven Areas of Responsibility for health education specialists. Going beyond knowledge transmission, health education interventions regarding HIV should teach women how to accurately assess their HIV risk. Also, health education specialists and public health practitioners must conduct qualitative and quantitative research to systematically elicit social and demographic information from African American women and use evidence-informed concepts and theories to address the factors that influence the health of this population. Such focused research efforts will assist practitioners to develop culturally tailored materials to educate and inform African American women about HIV prevention strategies and ensure messages are communicated effectively at the individuals' level of understanding to promote health literacy.

Public health practitioners, health educators, community health workers, PrEP navigators, and trusted members of the community (gatekeepers) should regularly develop workshops to provide clear and accurate information on HIV and biomedical prevention methods utilizing a variety of communication strategies and multiple venues to reach the African American community. By doing so, educators and practitioners have the opportunity to recognize, address, and ideally minimize the effect of stereotypes,

conspiracy beliefs, and medical mistrust within this community and develop evaluation plans to ensure information is communicated and conveyed as intended. As PrEP (when taken correctly) only protects an HIV-negative person from acquiring HIV, PrEP information must be included as one component within comprehensive sexuality education programming where prevention options for other sexually transmitted infections are discussed. Health educators should use the latest scientific evidence and community recommendations to inform policy and endorse the implementation of comprehensive sexuality education programming.

### **Implications for Healthcare Providers**

Clinicians across the American medical system should be trained to identify individuals at high and elevated risk for HIV and be prepared to discuss risk behaviors and biomedical prevention strategies such as PrEP with these patients. For healthcare providers concerned about addressing HIV stereotypes and HIV conspiracy beliefs, the negative relationship identified between HIV stereotypes and intent to use PrEP among African American women provides evidence that such stereotypes are still negatively impacting the lives of African American women and still need to be addressed. Consequently, there is a need for healthcare providers, health educators, and public health practitioners to not only recognize and acknowledge these stereotypes and related conspiracy beliefs but to also consistently work to reduce their impact. As part of combatting the stereotypes and conspiracy beliefs, medical professionals could conduct education within the African American community regarding stereotypes with a continued focus on educating the African American community on the safeguards

enacted to protect against medical misconduct and unethical research. Research by Muturi and An (2010) identified unfavorable perceptions of PrEP stemming from government and pharmaceutical industry mistrust. The unfavorable perceptions Muturi and An identified are still pertinent almost a decade after their publication.

More specific, behavioral and attitudinal implications for healthcare providers can be gained by examining attitudes toward condom use and intent to use PrEP. Within this study, the lack of a statistically significant relationship between two domains of attitudes toward condom use (embarrassment to purchase condoms and embarrassment to use condoms) and intent to use PrEP among African American women represent an opportunity for increased intervention. The lack of statistically significant relationships between these variables within this study suggest there is still a need to reduce condom-related embarrassment within this population where HIV/AIDS has reached a critical mass. Such condom-centric strategies should comprehensively address the psychological, physiological, and behavioral needs of African American women, help women identify the expressive social networks that impact their perceptions of purchasing and using condoms, and connect condom use to accurately assessing and perceiving their risk of contracting HIV. For women with favorable attitudes toward condom use who do not intend to take PrEP and are not taking PrEP, education to normalize condom use and emphasize correct and consistent condom use is essential to support condom use as an HIV prevention strategy.

Finally, the statistically significant findings regarding the differences in perceived HIV risk among African American cisgender women who have used PrEP as a

prevention strategy and those who have not used PrEP as a prevention strategy are important to consider. African American cisgender women who used PrEP to prevent HIV transmission had significantly more favorable attitudes regarding the risk factors of contracting HIV than their non-user peers. These findings further suggest that there is an apparent need for the healthcare community to allocate resources to programs and or additional staff dedicated to assist women to recognize and then protect themselves from HIV risk behaviors. Also, reaching people in serodiscordant and non-serodiscordant relationships to encourage biomedical prevention strategies requires provider education and patient education regarding the accessibility and benefits of PrEP.

Until Truvada for PrEP was approved by the FDA, the message to sexually active people across demographic groups has been “use condoms for all the sex you have, all the time or you will get AIDS” (Greene, 2017, p. 1580). Health education specialists understand that inciting fear is not an effective prevention strategy and fear-based change is most often temporary. Instead, health behavior change most often must take place thoughtfully and over a period of time. According to the American Medical Association, “the health and well-being of patients depend on a collaborative effort between patient and physician in a mutually respectful alliance” (Calabrese et al., 2017, p. 1573). Creating and fostering such mutually respectful alliances between African American women, medical providers, and health education specialists is key to future HIV prevention efforts.

## **Limitations**

This researcher identified specific limitations restricting this empirical investigation. Initially, the use of secondary data was identified as an overarching limitation. Even though secondary data were initially more easily accessible than primary data, the researcher had no control over the quality or validity of the data, the theories tested (or not tested), or the operationalization of the variables. Survey data were self-reported and therefore subject to survey fatigue, social desirability, inaccuracies, errors, and reporting bias, which simultaneously limit external validity of the findings.

In addition, snowball sampling was used to identify and recruit participants. As a method, snowball sampling is a two-stage convenience or purposive non-probability procedure that was used to select the individuals for this study. The data were collected via snowball sampling in Texas, which limits the findings' generalizability. As an example of the impact of snowball sampling on this study, approximately 41.1% of women sampled self-reported PrEP use. This relatively elevated percentage of PrEP use compared with findings from other studies is likely due to snowball sampling at AIDS Service Organizations, a recruitment venue where services and information are provided to HIV positive persons and their partners.

An additional limitation is the presence of missing data. A moderate sample size for analysis was essential to increase the power to detect statistically significant differences in this study. If all participants ( $N = 258$ ) answered each question, the precision and confidence of the estimates would have been increased. However, in the current study, the missing cases across study variables of interest limited results from

ordinal and logistic regression. More specifically, the survey instrument did not assess the sexual orientation of participants. By not assessing the sexual orientation of participants, it was not feasible to determine who engaged in heterosexual behaviors (which is important as heterosexual contact is the highest risk factor for HIV transmission). Despite these limitations, this study makes important contributions to the literature regarding African American cisgender women's attitudes toward condom use, HIV stereotypes, HIV knowledge, and perceived HIV risk among women who intend to use PrEP, women who report using PrEP for HIV prevention, and women who did not report PrEP use.

### **Recommendations for Future Research**

Based on the results of this study, the following recommendations are offered:

1. A follow-up study should be conducted to include African American cisgender women from various geographic regions of the United States in both urban and rural areas. This study's sample is region restricted as it focuses on African American cisgender women living in one large urban area in one state. Such a recommended study would ideally provide pertinent (and more generalizable) data on the relationship between African American women's intentions to use PrEP and their attitudes regarding condom use, HIV stereotypes, HIV knowledge, and perceived HIV risks.
2. As a broader recommendation, future research should intentionally test an entire theoretical model with samples of African American women to provide evidence that predicts and explains factors related to PrEP uptake, PrEP use, PrEP non-use, and PrEP intentions. Previous studies have tested constructs from the theory of planned

behavior, theory of reasoned action, and other theoretical models among samples of men who have sex with men, yet none (to date) have tested entire theories with African American women related to PrEP. The diffusion of innovations (DOI) theory is a population based theory that looks at behavior change in segments of the population. DOI is a powerful theory to influence social change by looking at the influence of social norms in behavior change. DOI theory provides a theoretical framework to understand how PrEP will be adopted by African American women. Diffusion of innovations aligns with social marketing's focus on behavior change and listening to the ideas of potential adopters. According to Sundstrom (2014), "designers must be listeners, in order to facilitate a consumer-oriented approach, in which researchers seek to understand the needs and interests of potential adopters, who are substantively engaged in developing, adapting, and improving an innovation based on their unique experiences" (p. 88). The DOI theory can be used to encourage the adoption of biomedical prevention options such as PrEP by understanding the characteristics of the target population that will be adopting the innovation. Social marketing creates awareness using multiple channels to reach the target audience; similarly DOI uses different strategies used to appeal to the different adopter categories (LaMorte, 2018).

3. Researchers should systematically examine the similarities and differences in the perceptions and behavioral intentions of African American women and Hispanic women regarding biomedical prevention strategies such as PrEP using TGP.

According to Hodder et al. (2010), "eighty percent of HIV cases in women occur in

black and Hispanic women” (p. 2). Research on the similarities and differences in the HIV risk perceptions and intent to use PrEP among ethnically diverse women would guide future interventions among these demographic groups. Constructs from the TGP are recommended as the theory appears ideal to study HIV in women of color due to the power imbalances more often observed in relationships with women of color than their white counterparts. As an example of such a study framework, Braithwaite and Thomas (2001) explored the role of gender-based power in relationships. These and other authors studying the TGP have observed imbalances of power in sexual relationships where women’s ability to negotiate safe sex practices is stripped due to real or perceived dependence on male partners. While conducting education is important, it is simultaneously important to conduct research to better understand how external factors influence women’s internal sexual behavior decisions. Furthermore, such research would provide context as to how women across SES groups perceive HIV risk while simultaneously informing practitioners about how to incorporate culturally appropriate and gender appropriate communication methods and messages to reach and resonate with all women.

4. Future studies should identify barriers to uptake and use of biomedical prevention strategies such as PrEP and intent to use PrEP among African American women. PrEP is the most promising HIV prevention strategy available to women, as it is female controlled, discrete, does not require partner consent to use, and may be compatible with both contraception and conception as desired (Bailey et al., 2017, p. 363). When Amaro (1995) examined the progress made for women in the

advancement of HIV prevention, she reported HIV prevention efforts often ignored gender, women's social status, and how women's roles affected sexual risk reduction and the negotiation of risk behaviors. In 1995, Amaro recommended developing prevention programs to address risky sexual behaviors that specifically put women at risk for HIV. Such female-centric programs are still needed and still recommended by this author.

5. This author recommends evaluating studies of health education and community interventions designed to understand the effects of beliefs in HIV stereotypes and related conspiracy beliefs. Additional qualitative research studies are necessary to gauge the effect of HIV stereotypes and conspiracy beliefs on PrEP uptake and use within the African American community. In this study, respondents who exhibited stronger beliefs in HIV stereotypes were less likely to use PrEP. Research by Earnshaw et al. (2012) examined the impact of stereotypes on HIV testing. Individuals who held negative stereotypes about HIV underestimated their HIV risk level despite engaging in high risk sexual behaviors. The stereotypes addressed in Earnshaw et al.'s (2012) study were not related to HIV itself but rather stereotypes regarding who and what types of behavior put individuals at risk for contracting HIV.

### **Recommendations for Practice**

Based on the results of this study, the following recommendations for practitioners are offered:

1. To address individual and community needs for health education, health educators must implement interventions/programs in non-traditional venues to increase

awareness of and PrEP acceptability by African American women. Additionally, health educators should also provide information about the safety and efficacy of PrEP across communication channels to reach a diverse audience. For maximum efficacy, this author recommends message channels such as social marketing to reach African American women. Social Marketing, a procedure rooted in public health and communications attempts to change people's behavior for the benefit of society as a whole; it is defined as, "the application of commercial marketing techniques to social problems" (Center for Community Health and Development, 2017, para. 5).

2. Another recommendation for practice informed by this study is to administer PrEP education to providers by physicians currently prescribing PrEP. Through such a recommendation, health educators should organize and implement PrEP provider education facilitated by physicians currently using PrEP to train fellow physicians and clinicians how to assess their patients' sexual and substance abuse history and educate patients about the availability of PrEP. According to previous research, patients' apprehensiveness about disclosing sexual behaviors and the inability of practitioners to identify patients who would benefit from PrEP needs to be addressed (Auerbach et al., 2015; Krakower et al., 2014; Ojikutu et al., 2015; Rendina et al., 2017). Krakower and Mayer (2015) explored provider prescribing problems for PrEP in an effort to determine who best initiates PrEP-related conversations and ultimately treatment conversations. HIV specialists can prescribe PrEP to individuals in serodiscordant relationships and simultaneously use their prescribing experience to serve as PrEP advocates and educators to fellow clinicians. Primary Care Physicians

(PCPs) and Sexually Transmission Infection (STI) clinicians consistently have access to people at elevated risk for HIV. Data suggest that among the different types of medical providers, PCPs would be better to prescribe PrEP as most people receive care from PCPs instead of HIV specialists. To assist providers and clinicians, organizations that provide PrEP are hiring and utilizing PrEP navigators specifically to assess patients' HIV risk discuss barriers to care, assist with insurance, educate patients on PrEP, develop a plan for medical adherence after starting PrEP, and refer them to a PrEP provider for a prescription. The CDC has a toolkit available for clinicians providing PrEP. The toolkit provides information to enhance clinicians' knowledge, patient and provider education sheets, risk assessments, counseling information, and if questions arise there is a consultation center providers may call for general information or prescribing advice (CDC, (2018a). This resource is free to clinicians to help provide quality care to patients interested in PrEP uptake and continued use. Research by Smith, Mendoza, Stryker, and Rose (2016) reported "clinicians reported that formal CDC or PHS guidelines would have the greatest influence about prescribing PrEP" (p. 8). Consequently, this author recommends wider dissemination of these already existing materials to more providers.

3. The biggest discrepancy identified within needs assessments and research among African American women was women's widespread misperception of HIV risk. Culturally tailored interventions are needed to assist African American women in accurately assessing their HIV risk, provide the tools to facilitate effective communication with partners disclosing pre-relationship risk, current sexual

behaviors, and STD/HIV prevention activities. Interventions that empower women are imperative to curtailing the epidemic. Empowerment should be incorporated in all interventions but especially within interventions tailored for women of color.

Messages regarding HIV risk and risky sexual behaviors must speak to women from a relatable, familiar voice. As an example of such messages, the Los Angeles Women's HIV/AIDS task force developed culturally tailored PrEP awareness videos targeting African American, transgender, and Latino women (Los Angeles County Public Health, 2018). Focus groups were conducted to elicit information from women of color regarding HIV transmission, human sexuality, and HIV prevention recommendations for marketing PrEP materials. Participants suggested that images reflecting healthy, successful, sexy, empowered women of color be included. Also, the information in such awareness and informational tools should be culturally sensitive and include HIV statistics. The outreach materials were developed for women based on feedback received from women and are available to be disseminated as a tool/resource. In the Latino community, awareness has been focused on HIV through the use of a Spanish telenovela or web series to educate and address HIV stigma. *Sin Vergüenza* (Without Shame) was “designed as an educational tool to draw in audiences and provoke discussion on HIV prevention and treatment nationwide” (AltaMed Health Services, 2019, para. 1). Both platforms serve as venues to encourage women to talk about sex, relationships, and HIV prevention.

4. To communicate and advocate for health education, health educators must develop culturally specific interventions to increase condom use paying attention to

psychosocial factors that increase African American women's risk of contracting HIV/AIDS. Due to stereotypes and conspiracy beliefs, some African Americans mistrust the healthcare system and will not participate in clinical trials or research studies. African American cisgender women in the current study favored condom use over biomedical prevention strategies in part because of their belief in HIV/AIDS stereotypes. Because these women self-reporting condom use to taking the PrEP medication, it is assumed they know when and how to correctly and consistently use condoms. However, training programs and interventions that teach and reiterate correct condom use are suggested for this population.

### **Conclusions**

This secondary data analysis sought to address gaps in the literature regarding the barriers to PrEP uptake and use among African American cisgender women in Texas. The use of PrEP among all at risk African American women could drastically reduce the number of women contracting and subsequently living with HIV. A specific contribution to the field of work is that 41.5% of cisgender women in this study self-reported PrEP use, and they represent all socioeconomic status' and education levels. This study reflects important contributions to the body of work on PrEP. This specific study captures information on African American cisgender women who have taken PrEP, HIV stereotypes, HIV knowledge, and perceived HIV risk. To date, one of the most significant barriers observed in HIV prevention for African American women is perceived risk of HIV infection. When women inaccurately assess their risk for contracting HIV, they are less likely to adopt protective behaviors while engaging in risky sexual behaviors. Within

this study, findings revealed that the more favorable their perceptions regarding HIV risk factors and their sexual behavior, the higher were African American cisgender women's intention to use PrEP.

African American women need empowerment based interventions to give them the tools needed to negotiate sexual risk reduction behaviors (Sutton et al., 2011). There are imbalances of power in sexual relationships where women's ability to negotiate safe sex practices with their partner is diminished. Future HIV prevention interventions must equip African American women to correctly assess their risk of infection and empower them to adopt protective behaviors and reduce their risk of infection. An effective intervention to increase uptake of PrEP will incorporate programs to assist women in addressing the root causes of HIV/AIDS infection.

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APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL LETTER



Institutional Review Board  
Office of Research and Sponsored Programs  
P.O. Box 425619, Denton, TX 76204-5619  
940-898-3378  
email: [IRB@twu.edu](mailto:IRB@twu.edu)  
<http://www.twu.edu/irb.html>

DATE: April 6, 2018

TO: Ms. Dominique Guinn  
Health Studies

FROM: Institutional Review Board (IRB) - Denton

Re: *Exemption for HIV Risk Perception and Attitudes toward Condom Use among African American Women Residing in Texas (Protocol #: 20078)*

The above referenced study has been reviewed by the TWU IRB (operating under FWA00000178) and was determined to be exempt from further review.

If applicable, agency approval letters must be submitted to the IRB upon receipt PRIOR to any data collection at that agency. Because a signed consent form is not required for exempt studies, the filing of signatures of participants with the TWU IRB is not necessary.

Although your protocol has been exempted from further IRB review and your protocol file has been closed, any modifications to this study must be submitted for review to the IRB using the Modification Request Form. Additionally, the IRB must be notified immediately of any adverse events or unanticipated problems. All forms are located on the IRB website. If you have any questions, please contact the TWU IRB.

APPENDIX B  
BE-PREPARED OUTREACH SURVEY

## Be PrEPared Outreach Survey



Thank you for participating Be-PrEPared. This survey should be completed after participating in a Be-PrEPared Outreach training, or after completing the Be-PrEPared Outreach e-Learning modules online. Please respond to the survey items based on the directions for each section. At the conclusion of the survey, you will receive instructions on how to receive your \$20 gift card. You may select one \$20 gift card from: (1) Target, (2) Amazon, (3) AMC Theaters or (4) Darden Restaurants. Gift cards will be delivered to you electronically by email.

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### General Information

★ I identify myself as a

- ☐ A cisgender woman (gender expression of female is the same as gender assigned at birth) [Value=1]  
☐ A cisgender male (gender expression of female is the same as gender assigned at birth) [Value=2]  
☐ A transgender woman (gender expression of female is different than gender assigned at birth) [Value=3]  
☐ A transgender male (gender expression of female is different than gender assigned at birth) [Value=4]

★ What is your age in years?

Please specify your race/ethnicity. Check all that apply

- ☒ White. [Checked=1]  
☒ Hispanic or Latino. [Checked=1]  
☒ Black or African American. [Checked=1]  
☒ Native American or American Indian. [Checked=1]  
☒ Asian / Pacific Islander. [Checked=1]  
☒ Other (please specify) [Checked=1]

★ Do you reside in Texas?

- ☐ Yes [Value=1]  
☐ No [Value=2]

If you do not reside in Texas, what state do you reside in?

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### Demographic Data

★ How old are you?

★ What city do you live in? (Please type your answer)

\* What is your zip code?

\* What is the highest level of school that you have completed?

- ☐ K-8 grade [Value=1]  
☐ 9-11 grade [Value=2]  
☐ High school graduate/ GED [Value=3]  
☐ Technical/ Vocational or Associates [Value=4]  
☐ Bachelor degree [Value=5]  
☐ Master's degree [Value=6]  
☐ Doctorate/Medical/Professional Degree [Value=7]

\* What is your relationship status?

- ☐ Single/Never Married [Value=1]  
☐ In a Relationship/Dating [Value=6]  
☐ Married/ Domestic Partner [Value=2]  
☐ Divorced/ Separated [Value=3]  
☐ Widowed [Value=4]  
☐ Other (please specify) [Value=5]

\* Which of the following best describes your current employment status?

- ☐ Employed-Full time [Value=1]  
☐ Employed-Part-time [Value=2]  
☐ College Student [Value=3]  
☐ Unemployed [Value=4]  
☐ Other (please specify) [Value=5]

In the past, I've conducted outreach with (select all that apply)

- ☐ Cisgender women of color [Checked=1]  
☐ Transgender women of color [Checked=1]  
☐ Women of color (unsure of gender expression) [Checked=1]  
☐ None of the above [Checked=1]

Please use this space to describe your primary means of earning income. The description can include the type of work you engage in, general information about your employer, or a general job description.

(1000 characters remaining)

What is your annual household income (i.e., combined income of all members of your family)?

- ☐ Less than \$20,000 [Value=1]  
☐ \$20,001-\$40,000 [Value=2]  
☐ \$40,001-\$60,000 [Value=3]  
☐ \$60,001-\$80,000 [Value=4]  
☐ \$80,001-\$100,000 [Value=5]  
☐ More than \$100,001 [Value=6]

\* Where do you primarily receive healthcare? (select only one)

- ☐ Healthcare provider office [Value=2]  
☐ Community clinic or health center [Value=3]

- ☐ Hospital [Value=4]  
☐ Prison clinic [Value=5]  
☐ Other (please specify) [Value=6]

\* Have you received an HIV test in the past 6 months?

- ☐ Yes [Value=1]  
☐ No [Value=2]  
☐ I don't know [Value=3]  
☐ I do not wish to answer [Value=4]

\* I've heard of biomedical HIV prevention strategies such as PrEP as a way to prevent HIV transmission prior to completing this survey.

- ☐ Yes [Value=1]  
☐ No [Value=2]  
☐ I don't know [Value=3]

I have taken PrEP, or I am currently taking PrEP, as a way to prevent the HIV transmission

- ☐ Yes [Value=1]  
☐ No [Value=2]  
☐ Other (please specify) [Value=3]

If you have heard about biomedical HIV prevention strategies such as PrEP as a way to prevent HIV transmission prior to completing this survey, where did you receive the information? Please select all that apply.

- ☒ I've not heard of biomedical HIV prevention strategies prior to completing this survey. [Checked=1]  
☒ Healthcare provider [Checked=1]  
☒ Friend or acquaintance [Checked=1]  
☒ Family member [Checked=1]  
☒ On the news/television [Checked=1]  
☒ Be-PrEPared.org website [Checked=1]  
☒ Internet source [Checked=1]  
☒ Pamphlet, handout, or some form of print material [Checked=1]  
☒ HIV/AIDS Community-based organization [Checked=1]  
☒ Pharmacy [Checked=1]  
☒ Word of mouth [Checked=1]  
☒ Other (please specify) [Checked=1]

Couples in which one person has contracted the virus that causes AIDS (or is HIV positive) and the other person has not contracted the virus that causes AIDS, (or is HIV negative) are sometimes called sero-discordant relationship. Please answer these questions based on the HIV status of either you or your partner.

\* Are you currently in a sero-discordant relationship?

- ☐ Yes [Value=1]  
☐ No [Value=2]  
☐ I don't know [Value=3]  
☐ I do not wish to answer [Value=4]

\* Have you ever been in a sero-discordant relationship?

- ☐ Yes [Value=1]  
☐ No [Value=2]  
☐ I don't know [Value=3]  
☐ I do not wish to answer [Value=4]

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The items listed below will assess your knowledge about HIV or the virus that causes AIDS. For each statement, please select "T" if you think the item is true, and "F" if you think the item is false.

	T=True	F=False
* Coughing and sneezing DO NOT spread HIV, or the virus that causes AIDS.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* A person can get HIV by sharing a glass of water with someone.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* Pulling out the penis before a man climaxes/ejaculates/cums keeps a woman from getting HIV during sex.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* A woman can get HIV if she has anal sex with a man.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* Showering, or washing one's genitals/private parts, after sex keeps a person from getting HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* All pregnant women infected with HIV will have babies born with AIDS.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* People who have been infected with HIV quickly show serious signs of being infected.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* There is a vaccine that can stop adults from getting AIDS.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* People are likely to get HIV by deep kissing, putting their tongue in their partner's mouth, if their partner has HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* A woman cannot get HIV if she has sex during her period.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* There is a female condom that can help decrease a woman's chance of getting HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* A natural skin condom works better against HIV than does a latex condom.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* A person will NOT get HIV if she or he is taking antibiotics.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* Having sex with more than one partner can increase a person's chance of being infected with HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* Taking a test for HIV one week after having sex will tell a person if she or he has HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* A person can get HIV by sitting in a hot tub or swimming pool with a person who has HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* A person can get HIV from oral sex.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]
* Using Vaseline or baby oil with condoms lowers the chance of getting HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]

Page Break

For this section, you will need to reflect on your thoughts and actions about HIV/AIDS prevention and PrEP PRIOR to participating in Be-PrEPared

Please respond to the questions below even if you are not sexually active or have never used (or had a partner who used) condoms. In such cases, indicate how you think you would feel in such a situation. Choose a number on the scale that best represents your feelings about each statement. There are no right or wrong responses to any of these statements. Select the number that best represents your opinion. You may skip certain questions or you may choose not to answer any of the questions in this section. Be sure to select a response that best represents your feelings about each statement BEFORE completing Be-PrEPared.

	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly Agree
It is really hard to bring up the issue of using condoms to my partner.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
Use of a condom is an interruption of foreplay.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
Women think men who use condoms are jerks/unfaithful.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
Condoms are an effective method of preventing the spread of AIDS and other sexual transmitted diseases.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
I always feel really uncomfortable when I buy condoms.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
Condoms are unreliable.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
When I suggest using a condom I am almost always embarrassed.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]

	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]	[Value=6]
Condoms ruin the sex act.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think condoms are an excellent means of contraception.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't think that buying condoms is awkward	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is very embarrassing to buy condoms.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is easy to suggest to my partner that we use a condom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If a couple is about to have sex and the man suggests using a condom, it is less likely that they will have sex.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Condoms do not offer reliable protection.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Condoms are a lot of fun.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I never know what to say when my partner and I need to talk about condoms or other protection.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It would be embarrassing to be seen buying condoms in a store.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who suggest condom use are a little bit geeky.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The use of condoms can make sex more stimulating.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Condoms are an effective method of HIV prevention.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm comfortable talking about condoms with my partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Men who suggest using a condom are really boring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I need condoms, I often dread having to get them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A woman who suggests using a condom does not trust partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Condoms are uncomfortable for both parties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

For this section, you will need to reflect on your thoughts and actions about HIV/AIDS prevention and PrEP **AFTER** participating in Be-PrEPared

Please respond to the questions below even if you are not sexually active or have never used (or had a partner who used) condoms. In such cases, indicate how you think you would NOW feel in such a situation. Choose a number on the scale that best represents your feelings about each statement. There are no right or wrong responses to any of these statements. Select the number that best represents your opinion. You may skip certain questions or you may choose not to answer any of the questions in this section. Be sure to select a response that best represents your feelings about each statement **AFTER** completing Be-PrEPared.

	1=Strongly disagree	2=Disagree	3=Slightly disagree	4=Slightly agree	5=Agree	6=Strongly Agree
It is really hard to bring up the issue of using condoms to my partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of a condom is an interruption of foreplay.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Women think men who use condoms are jerks/unfaithful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Condoms are an effective method of preventing the spread of AIDS and other sexual transmitted diseases.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I always feel really uncomfortable when I buy condoms.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Condoms are unreliable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I suggest using a condom I am almost always embarrassed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Condoms ruin the sex act.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think condoms are an excellent means of contraception.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't think that buying condoms is awkward	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Be PrEPared Outreach Survey

It is very embarrassing to buy condoms.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
It is easy to suggest to my partner that we use a condom	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
If a couple is about to have sex and the man suggests using a condom, it is less likely that they will have sex.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
Condoms do not offer reliable protection.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
Condoms are a lot of fun.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
I never know what to say when my partner and I need to talk about condoms or other protection.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
It would be embarrassing to be seen buying condoms in a store.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
People who suggest condom use are a little bit geeky.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
The use of condoms can make sex more stimulating.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
Condoms are an effective method of HIV prevention.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
I'm comfortable talking about condoms with my partner.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
Men who suggest using a condom are really boring	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
When I need condoms, I often dread having to get them.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
A woman who suggests using a condom does not trust partner.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
Condoms are uncomfortable for both parties.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]

Page Break

For this section, you will need to reflect on your thoughts and actions about HIV/AIDS prevention and PrEP PRIOR to participating in Be-PrEPared.

Please indicate how confident you were in carrying out the following sexual health practices if you needed to. Think of confidence as having the knowledge, skills, and comfort necessary to effectively do these things. The term "partner" refers to whomever you might choose to engage in sexual activity with. Be sure to select a response that best represents your feelings about each statement BEFORE participating in Be-PrEPared.

	Not at all Confident	Slightly Confident	Moderately Confident	Highly Confident	Extremely Confident
Performing breast self-exams	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]
Getting tested for a sexually transmitted infection (STI)	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]
Getting an HIV test	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]
Talking with a health care worker about a sexual health issue like an STI	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]
Making thoughtful, good decisions about your sexual behavior	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]
Practicing sexual abstinence	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]
Establishing a fulfilling sexual relationship	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]
Talking with a (prospective) sexual partner about your sexual history	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]
Using a condom	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]
Using another form of birth control other than a condom	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]
Negotiating with a sexual partner to practice safer sex	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]
Talking with a sexual partner about a sexual	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]

health issue, like an STI	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Talking with a sexual partner about a relationship issue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Dealing with a sexual functioning difficulty (like difficulty achieving orgasm or ejaculating too quickly)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Preventing a sexual assault if it occurs to you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Dealing with a sexual assault if it occurs to you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Helping a friend who has been sexually assaulted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Eliminating sexual double standards (based on gender) in your life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Eliminating gender stereotyping from your life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Accepting diversity in sexual orientation (heterosexuality, homosexuality, bisexuality)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]

For this section, you will need to reflect on your thoughts and actions about HIV/AIDS prevention and PrEP AFTER participating in Be-PrEPared.

Please indicate how confident you are in carrying out the following sexual health practices if you needed to. Think of confidence as having the knowledge, skills, and comfort necessary to effectively do these things. The term "partner" refers to whomever you might choose to engage in sexual activity with. Be sure to select a response that best represents your feelings about each statement AFTER completing Be-PrEPared.

	1 = Not at all Confident	2 = Slightly Confident	3 = Moderately Confident	4 = Highly Confident	5 = Extremely Confident
Performing breast self-exams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Getting tested for a sexually transmitted infection (STI)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Getting an HIV test	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Talking with a health care worker about a sexual health issue like an STI	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Making thoughtful, good decisions about your sexual behavior	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Practicing sexual abstinence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Establishing a fulfilling sexual relationship	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Talking with a (prospective) sexual partner about your sexual history	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Using a condom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Using another form of birth control other than a condom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Negotiating with a sexual partner to practice safer sex	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Talking with a sexual partner about a sexual health issue, like an STI	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Talking with a sexual partner about a relationship issue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Dealing with a sexual functioning difficulty (like difficulty achieving orgasm or ejaculating too quickly)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Preventing a sexual assault if it occurs to you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Dealing with a sexual assault if it occurs to you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Helping a friend who has been sexually assaulted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Eliminating sexual double standards (based on gender) in your life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Eliminating gender stereotyping from your life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]	[Value=5]
Accepting diversity in sexual orientation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(heterosexuality, homosexuality, bisexuality)

[Value=1]

[Value=2]

[Value=3]

[Value=4]

[Value=5]

Page Break

For this section, you will need to reflect on your thoughts and actions about HIV/AIDS prevention and PrEP PRIOR to participating in Be-PrEPared.

HIV is known as the virus that causes AIDS (Acquired Immune Deficiency Syndrome). The items listed below refer to people's beliefs about the topic of AIDS. We are interested in whether you agree or disagree with these statements. As such, there are no right or wrong answers, only your own individual opinions. Be sure to select a response that best represents your feelings about each statement BEFORE completing Be-PrEPared.

	A=Disagree	B=Slightly Disagree	C=Slightly Agree	D=Agree
HIV infection is a serious challenge to the notion of recreational sex.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
Because of HIV infection, everyone has a responsibility to practice healthful sexual behaviors.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
Condoms offer protection against the spread of HIV infection.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
HIV infection cannot be transmitted by heterosexual (male-female) sexual activity.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
People can get HIV infection from their sexual partners.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
The more sexual partners people have, the greater their chance of contracting HIV infection.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
HIV infection is associated with multiple anonymous sexual contacts.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
HIV infection is transmitted by intimate sexual contact.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
People can contract HIV infection even though they have had sex with only one person.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
Condoms are a safe shield against HIV infection.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
HIV infection is essentially a sexually transmitted disease.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
People can contract HIV infection from sexual contact with a single infected person.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
Any sexually active person can get HIV infection.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
People get HIV infection from sex.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
People don't engage in sex very much nowadays because of HIV infection.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
HIV infection is transmitted primarily through sexual relations.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
Proper use of condoms can reduce the risk of contracting HIV infection.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
The use of condoms can prevent the spread of HIV infection.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
Heterosexuals who use condoms can lessen their risk for getting HIV infection.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
People who have "one-night stands" will probably contract HIV infection.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]

For this section, you will need to reflect on your thoughts and actions about HIV/AIDS prevention and PrEP AFTER participating in Be-PrEPared.

HIV is known as the virus that causes AIDS (Acquired Immune Deficiency Syndrome). The items listed below refer to people's beliefs about the topic of AIDS. We are interested in whether you agree or disagree with these statements. As such, there are no right or wrong answers, only your own individual opinions. Be sure to select a response that best represents your feelings about each statement AFTER completing Be-PrEPared.

	A = Agree.	B = Slightly Agree.	C = Slightly Disagree.	D = Disagree.
HIV infection is a serious challenge to the notion of recreational sex.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
Because of HIV infection, everyone has a responsibility to practice healthful sexual behaviors.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]

Condoms offer protection against the spread of HIV infection.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
HIV infection cannot be transmitted by heterosexual (male-female) sexual activity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
People get HIV infection from their sexual partners.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
The more sexual partners people have, the greater their chance of acquiring HIV infection.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
HIV infection is associated with multiple anonymous sexual contacts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
HIV infection is transmitted by intimate sexual contact.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
People can contract HIV infection even though they have had sex with only one person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
Condoms are a safe shield against HIV infection.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
HIV infection is essentially a sexually transmitted disease.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
People can contract HIV infection from sexual contact with a single infected person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
Any sexually active people can get HIV infection.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
People get HIV infection from sex.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
People don't engage in sex very much nowadays because of HIV infection.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
HIV infection is transmitted primarily through sexual relations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
Proper use of condoms can reduce the risk of contracting HIV infection.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
The use of condoms can prevent the spread of HIV infection.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
Heterosexuals who use condoms can lessen their risk for getting HIV infection.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
People who have "one-night stands" will probably contract HIV infection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]

Page Break

For this section, you will need to reflect on your thoughts and actions about HIV/AIDS prevention and PrEP **PRIOR** to participating in Be-PrEPared.

For each of the following statements, please indicate whether or not you agree or disagree with each statement. There are no right or wrong answers. Be sure to select a response that best represents your feelings about each statement **BEFORE** completing Be-PrEPared.

	Strongly Disagree	Disagree	Agree	Strongly Agree
* I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV if it were available.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV if I could afford it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV if it caused mild temporary side effects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I would find it embarrassing to use biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I would share information about biomedical HIV prevention strategies such as PrEP to others in my community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I would feel comfortable telling my partner I was taking biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I would benefit from taking biomedical HIV prevention strategies such as PrEP as a way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]

9/25/2016

## Be PrEPared Outreach Survey

* <del>I perceive the spread of HIV to benefit from taking biomedical HIV prevention strategies such as PrEP as a way to prevent the spread of HIV.</del>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* Most women I know would take biomedical HIV prevention strategies such as PrEP as a way to prevent the spread of HIV.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* Taking biomedical HIV prevention strategies such as PrEP as a way to prevent the spread of HIV seems risky.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I think my doctor would approve of me taking biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I think my colleagues would approve of me taking biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* My immediate family would be supportive if I took biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* Most people who are important to me would approve of me taking biomedical HIV prevention strategies such as PrEP as a way to prevent the spread of HIV.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV if it was recommended by a doctor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV if it was recommended by a close friend.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV if it was recommended by a family member.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* People in my community would benefit from biomedical HIV prevention strategies such as PrEP as a way to prevent the spread of HIV.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I tend to be concerned about what people think of me, even if I don't know them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I generally do what my family expects of me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I would not want to do something my friends disapproved of.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* If my superiors told me to do something I disagreed with, I would obey their wishes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* Sometimes I do what my friends say to do, even though I know they are wrong.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I usually take prescription medication as recommended.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I usually take over the counter medication as recommended.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* My actions to use biomedical HIV prevention strategies such as PrEP would inspire others to do the same.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I experience a sense of community to address the impact of HIV/AIDS among women of color.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=4]	[Value=5]
* I worry about getting infected with HIV	<input type="radio"/> None of the time [Value=1] <input type="radio"/> Rarely [Value=2] <input type="radio"/> Some of the time [Value=3] <input type="radio"/> A moderate amount of time [Value=4] <input type="radio"/> A lot of the time [Value=5] <input type="radio"/> All the time [Value=6]			
* I think my chances of getting infected with HIV are	<input type="radio"/> Zero. [Value=1] <input type="radio"/> Almost zero or very low [Value=2] <input type="radio"/> Low [Value=3] <input type="radio"/> Moderate. [Value=4] <input type="radio"/> Large. [Value=5]			

<https://www.psychdata.com/auto/surveyprint.asp?UID=909468&SID=173078>

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☐ Very large. [Value=6]

	Strongly disagree with this statement	Disagree with this statement	Slightly disagree with this statement	Slightly agree with this statement	Agree with this statement	Strongly agree with this statement
* Contracting or getting HIV is something I have thought about.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
* I feel vulnerable to HIV infection	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
* My risk for getting infected with HIV is lower than those in my community.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
* My risk for getting infected with HIV is lower than those that are close to me (i.e. friends, peers).	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]
* My risk for getting infected with HIV is lower than other women of color.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]	<input type="radio"/> [Value=5]	<input type="radio"/> [Value=6]

Page Break

For this section, you will need to reflect on your thoughts and actions about HIV/AIDS prevention and PrEP AFTER participating in Be-PrEPared.

For each of the following statements, please indicate whether or not you agree or disagree with each statement. There are no right or wrong answers. Be sure to select a response that best represents your feelings about each statement AFTER completing Be-PrEPared.

	SA=Strongly agree with the statement	A=Agree with the statement	D=Disagree with the statement	SD=Strongly disagree with the statement
* I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV once it became available.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV if I could afford it.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV if it caused mild temporary side effects.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* I would find it embarrassing to use biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* I would share information about biomedical HIV prevention strategies such as PrEP to others in my community.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* I would feel comfortable telling my partner I was taking biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* I would benefit from taking biomedical HIV prevention strategies such as PrEP as a way to prevent the spread of HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* All women would benefit from taking biomedical HIV prevention strategies such as PrEP as a way to prevent the spread of HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* Most women I know would take biomedical HIV prevention strategies such as PrEP as a way to prevent the spread of HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* Taking biomedical HIV prevention strategies such as PrEP as a way to prevent the spread of HIV seems risky.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* I think my doctor would approve of me taking biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* I think my colleagues would approve of me taking biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* My immediate family would be supportive if I took biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* Most people who are important to me would approve of me taking biomedical HIV prevention strategies such as PrEP as a way to prevent the spread of HIV.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* I would take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV if it was recommended by a doctor.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* I would take biomedical HIV prevention strategies such as PrEP to prevent the spread	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]

* <del>Did you take biomedical HIV prevention strategies such as PrEP to prevent the spread of HIV if it was recommended by a family member.</del>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* People in my community would benefit from biomedical HIV prevention strategies such as PrEP as a way to prevent the spread of HIV.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* I tend to be concerned about what people think of me, even if I don't know them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* I generally do what my family expects of me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* I would not want to do something my friends disapproved of.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* If my superiors told me to do something I disagreed with, I would obey their wishes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* Sometimes I do what my friends say to do, even though I know they are wrong.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* I usually take prescribed as recommended.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* I usually take over the counter medication as recommended	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* My actions to take biomedical HIV prevention strategies would inspire others to do the same.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* I experience a sense of community to address the impact of HIV/AIDS among women of color	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* I worry about getting infected with HIV	<input type="radio"/> None of the time [Value=1] <input type="radio"/> Rarely [Value=2] <input type="radio"/> Some of the time [Value=3] <input type="radio"/> A moderate amount of time [Value=4] <input type="radio"/> A lot of time [Value=5] <input type="radio"/> All the time [Value=6]			
* I think my chances of getting infected with HIV are	<input type="radio"/> Zero [Value=1] <input type="radio"/> Almost zero [Value=2] <input type="radio"/> Small [Value=3] <input type="radio"/> Moderate [Value=4] <input type="radio"/> Large [Value=5] <input type="radio"/> Very Large [Value=6]			
* Getting HIV is something I have	<input type="radio"/> Never thought about [Value=1] <input type="radio"/> Rarely thought about [Value=2] <input type="radio"/> Thought about some of time [Value=3] <input type="radio"/> Thought about often [Value=4]			
	SA=Strongly agree with the statement	A=Agree with the statement	N=Neither agree nor disagree with the statement	D=Disagree with the statement
				SD=Strongly disagree with the statement
* Contracting or getting HIV is something I have thought about.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* I feel vulnerable to HIV infection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* My risk for getting infected with HIV is lower than those in my community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* My risk for getting infected with HIV is lower than those that are close to me (i.e. friends, peers).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]
* My risk for getting infected with HIV is lower than other women of color.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	[Value=1]	[Value=2]	[Value=3]	[Value=4]

Page Break

In this final section of the survey, please share your thoughts about the format used to share information about HIV/AIDS prevention and PrEP.

- \* Which format was used to share information about HIV/AIDS prevention and PrEP as a part of Be-PrEPared?

- ☐ An individual or one-on-one setting [Value=1]  
☐ A group setting [Value=2]  
☐ The online eLearning content modules [Value=3]

- \* Indicate the 2-digit month and 4-digit year the information was shared with you or when you completed the e-Learning modules (mm/yyyy).

Please indicate if the following statements are true or false as it relates to your intent to share information from BePrEPared with women of color. Select "unsure" if you are unable to answer at this time.

	True	False	Unsure
* I plan to share information from BePrEPared with cisgender women of color.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]
* I plan to share information from BePrEPared with transgender women of color.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]
* I plan to share information from BePrEPared with women of color in general.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]
* I plan to share information from BePrEPared with women of color-unsure of gender expression.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]
* I plan to share information from BePrEPared in the next 30 days.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]
* I plan to share information from BePrEPared in the next 3 months.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]
* I plan to share information from BePrEPared in the next 6 months.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]
* I plan to share information from BePrEPared in the next 12 months.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]

	Strongly Disagree	Disagree	Agree	Strongly Agree
* The Be-PrEPared educational content was useful.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* Given the time allowed, the amount of material covered was appropriate.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* My level of knowledge about HIV prevention has increased after participating in BePrEPared.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* My level of knowledge about PrEP has increased after participating in BePrEPared.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* My level of knowledge about women's health issues has increased after participating in BePrEPared.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* My level of confidence to share information about HIV prevention among women of color has increased after participating in BePrEPared.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* My level of confidence to share information about PrEP among women of color has increased after participating in BePrEPared.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* My level of confidence to share information about women's health issues among women of color has increased after participating in BePrEPared.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* The information presented was concise and organized.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* Overall, I am satisfied with the way the material was presented.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]
* I would recommend the material from Be-PrEPared to those I know to increase knowledge and awareness about HIV/AIDS prevention and PrEP.	<input type="radio"/> [Value=1]	<input type="radio"/> [Value=2]	<input type="radio"/> [Value=3]	<input type="radio"/> [Value=4]

9/25/2016

## Be PrEPared Outreach Survey

Please use this space to describe possible ways in which you will share information from BePrEPared with women of color.

(1000 characters remaining)

Please use this space to provide any additional comments or suggestions for improving Be-PrEPared.

(1000 characters remaining)

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## Be PrEPared Outreach Survey

Your unique Respondent ID# is: 0

[\(Print this page\)](#)

**Please be sure to read the following statements. Information on how to obtain your gift card is listed below.**

*Thank you for your participation!*

*Please print or record your unique ID number, and complete the form found at the link below.*

*Your unique ID number is needed to verify completion of the survey. If you have any questions, please feel free to email us at [kparker@be-prepared.org](mailto:kparker@be-prepared.org). Allow 48-72 hours to process the information and email your gift card.*

<https://goo.gl/forms/w5kf1mDNVBjwYqio2>

*We are constantly updating our website. Be sure to visit us as Be-PrEPared.org for more information on HIV/AIDS, PrEP and women's health issues.*

For maximum confidentiality, please close this window.

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