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Perceived Advantages and Disadvantages of Using Pre-Exposure Prophylaxis (PrEP) among Sexually Active Black Women:

An Exploratory Study

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Abstract

Knowledge of pre-exposure prophylaxis (PrEP) continues to remain scarce among Black women who are disproportionately affected by HIV in the United States. A thematic analysis of open-ended questions from a sample of Black women (n=119) who completed a mix-methods, online, e-health study was conducted to examine the perceived advantages and disadvantages of using PrEP. Being a female controlled method, empowerment, option for women with risky sex partners, and serodiscordant couples were advantages described. Disadvantages of PrEP were identified as the complexity of the choice, encouragement of sex with risky partners, increased burden, promotion of unprotected sex, and newness of the drug.

Keywords

Black women; HIV Prevention; Pre-exposure prophylaxis; PrEP

Introduction

IN 2012, The U.S. Food and Drug Administration (FDA) Approved Truvada (tenofovir plus emtricitabine) for HIV pre-exposure prophylaxis (PrEP), the first antiretroviral (ARV) drug approved to reduce the risk of HIV infection in uninfected individuals, who are at high risk of HIV infection and who may engage in sexual activity with HIV-infected partners (Centers for Disease Control and Prevention., 2014). The FDA'S approval was informed by three clinical trials, two of which showed that Truvada works to reduce HIV by upwards of 90 percent when taken as prescribed (Baeten & Grant, 2013; Centers for Disease Control and Prevention., 2014; Grant et al., 2010). With the publication of the U.S. Public Health Service's clinical practice guideline for PrEP (CDC, 2014) and the success of open-label studies and demonstration projects conducted among MSM in the United States (Liu et al.,

2014; Volk et al., 2015), the National HIV/AIDS Strategy Updated to 2020 called for the scale-up of the delivery of PrEP and other highly effective prevention services to reduce new HIV infections among adults (House, 2015).

Despite the fact that 468,000 U.S. women could benefit from PrEP (similar to the number of eligible gay men) (Smith et al., 2015) and the weight of evidence that demonstrates its effectiveness, many women still remain unaware that it is available for women (Auerbach, Kinsky, Brown, & Charles, 2015; Flash et al., 2014).

Within the United States, Black women are at an elevated risk of HIV transmission, not only because of their minority status, but also because of how it intersects with their gender and sexuality (Ferguson, Quinn, Eng, & Sandelowski, 2006). Thus, heterosexual contact has become the leading cause of transmission among Black women, accounting for 87% of transmission (Centers for Disease Control and Prevention., 2013). One reason has to do with the lack of female control over sexual health decisions, including condom use (Flash et al., 2014). The continued rise of transmission is due to traditional risk factors, the high-risk behaviors of their partners, and the cultural barriers that make it difficult for women to discuss, negotiate, and persuade their partners to cooperate in safe sex practices (Paxton, Williams, Bolden, Guzman, & Harawa, 2013). Black women who are unaware of their HIV status exhibit limited self-protective behaviors including loss of autonomy and powerlessness, particularly in the context of rape or partner infidelity, as well as a need for increased health related knowledge (Flash et al., 2014). Power imbalances between men and women have contributed to much of the observed HIV risk and subsequent spread of HIV in the U.S. among Black women (Raiford, Wingood, & Diclemente, 2007). Demanding condom use from a boyfriend or husband is often not feasible for women in established relationships and can lead to partner violence, a phenomenon increasingly implicated in HIV infection (Frye et al., 2011; Mittal, Senn, & Carey, 2012).

Behavioral interventions endorsed by the CDC for women and couples, which focused on increasing HIV/AIDS and STD knowledge, positive attitudes towards sex/sexuality, risk perception, condom use/negotiation skills, and self-efficacy, have been shown to be effective (Weeks et al., 2010). Even with successful behavioral interventions, the disparity remains in spite of the current reduction in new infections among Black women (Centers for Disease Control and Prevention., 2013; Centers for Disease Control and Prevention & Project, 1999). The need for female-initiated prevention is underscored by national estimates of HIV infection risk among Black women and the personal, behavioral, environmental, and cultural factors related to that risk (Flash et al., 2014). In this context, it is essential to ensure that women have available to them more prevention methods that they can initiate and control (Guest et al., 2010). One potential option is pre-exposure prophylaxis (PrEP) for the prevention of HIV transmission for individuals who are HIV-negative (Centers for Disease Control and Prevention., 2014). Previous research among Black women has shown support for women-initiated HIV prevention options because they have the significant potential to enhance women's power to further reduce their risk of infection and/or transmission (Weeks et al., 2010). PrEP is unlike other HIV prevention methods because it is a discreet, individually-controlled method that is not dependent upon partner(s)' involvement (Centers for Disease Control and Prevention, 2014). However, despite it being officially approved by

the CDC, the uptake of PrEP has been relatively limited and slow (Kirby & Thornber-Dunwell, 2014; Landovitz & Currier, 2009). In addition, most PrEP implementation efforts have focused primarily on reaching gay and bisexual men because they account for the majority of new infections in the U.S. (Al-Tayyib, Thrun, Haukoos, & Walls, 2014; Bowleg, Lucas, & Tschann, 2004; Brooks et al., 2012; Galea et al., 2011; Golub, Operario, & Gorbach, 2010), but when we look at the facts about the HIV epidemic among women, we see the vital importance of including women in the implementation efforts (Auerbach et al., 2015; Flash et al., 2014).

Even with successful behavioral interventions, the need for female-initiated prevention is underscored by national estimates of HIV infection risk among Black women and the personal, behavioral, environmental, and cultural factors related to that risk (Centers for Disease Control and Prevention., 2013; Centers for Disease Control and Prevention & Project, 1999; Flash et al., 2014). In this context, it is essential to ensure that women have available to them more prevention methods that they can initiate and control (Guest et al., 2010), such as PrEP (Centers for Disease Control and Prevention., 2014). Previous research among Black women has shown support for female-initiated HIV prevention options because they have the significant potential to enhance women's power to further reduce their risk of infection and/or transmission (Weeks et al., 2010). PrEP is unlike other HIV prevention methods because it is a discreet, individually-controlled method that is not dependent upon partner(s)' involvement (Smith, Koenig, & Martin, 2014). However, despite it being officially approved by the CDC, the uptake of PrEP has been relatively limited and slow (Kirby & Thornber-Dunwell, 2014; Landovitz & Currier, 2009). In addition, most PrEP implementation efforts have focused primarily on reaching gay and bisexual men because they account for the majority of new infections in the U.S. (Al-Tayyib et al., 2014; Bowleg et al., 2004; Brooks et al., 2012; Galea et al., 2011; Golub et al., 2010), but when we look at the facts about the HIV epidemic among women, we see the vital importance of including women in the implementation efforts (Auerbach et al., 2015; Flash et al., 2014).

The larger study, from which the current data are derived, focuses on understanding the participants' current knowledge of pep (post-exposure prophylactic) and PrEP, and how they rate an e-health video used to educate them about the two biomedical prevention methods. We found that a substantial proportion (75%) was interested in using PrEP after watching the video (Bond, 2015). To further explore the potential barriers and motivations surrounding these intentions, we included separate open-ended questions in the survey to allow participants to express the perceived advantages and disadvantages to using PEP and PrEP. Here we described the findings of the open-ended questions of the survey related to PrEP use.

Methods

Study Population

Before data collection commenced, participants completed a written informed consent process and were screened for eligibility. Eligibility criteria for the study were programmed into the online baseline survey. Participants had to: 1) identify as a female; 2) identify as Black and/or African American 3) be age 18 or older; 4) report sex with a male partner

within the past 60 days; 5) have the ability to read and respond in English; and 6) report watching all of the e-health video that provided information on PEP and PrEP. Women who completed the screener survey but were ineligible for the study were automatically transferred to the exit page.

Procedures

This online investigation recruited potential participants by using a social marketing campaign that involved the use of multiple venues to spread the news about this study opportunity. These included modern social networking technologies such as Facebook, Twitter, LinkedIn, and emails, as well as the posting of flyers in community settings and on website bulletin boards (e.g. Craigslist, Backpages). Social media site posts, emails, and messages included the link to the study opportunity) inviting eligible participants to complete the study survey. Those who completed the study, received emails, or saw posts about the study opportunity and were asked to forward the information to others who might be interested and eligible to participate.

At the close of data collection, there were 384 potential participants who consented to the study. However, the final sample included only 119 participants. This reflected a screening of eligibility and a careful review of all the data to ensure the quality of the data. More specifically, the full data set (N=384) was reviewed for duplications (i.e. duplicate computer IP addresses), and for subjects meeting the inclusion/exclusion criteria. In addition to the original inclusion criteria, participants that did not watch the entire video were excluded from the sample to ensure that the participants in the analysis received the same exposure during the study. As a result of this review, the final sample size was N=119.

Participants completed a quantitative assessment that surveyed basic demographic information, sexual risk behavior, and knowledge of PEP and PrEP. During the survey, participants watched a 9-minute video on PEP and PrEP, which was based on a literature review, to ensure that everyone had the same basic minimum understanding of PEP and PrEP. After watching the video, participants were asked to rate the video and access their prior knowledge of PEP or PrEP; their intentions to use PEP or PrEP in the future—if appropriate; their intentions to recommend either one to other women; and, via open-ended questions, ascertained their thoughts and feelings about PEP and PrEP, including perceived advantages and disadvantages.

Study participants who completed the survey were entered into an anonymous drawing for the chance to win a gift certificate in the amount of \$300, \$200, or \$100 for use on www.Amazon.com. The program permitted generating the prizes in such a manner that the researcher could not access any email addresses submitted; thus, all study participants in the drawing remained anonymous, and the winner remained unknown to the researcher. The Institutional Review Board of Columbia University Teachers College reviewed and approved the protocols for this study.

Data Analysis

Quantitative Analysis—Survey data were used to provide a more comprehensive portrait of the women who participated.

Analysis of close-ended survey data used PASW Statistics 22 (SPSS, Inc., 2014, Chicago, IL).

Qualitative Analysis—Analyses of the open-ended questions were thematic, focusing on dominant themes that emerged and were organized by the questions asked; attention was paid to the level of endorsement of a theme across the sample. For the qualitative analysis, a grounded theoretical approach was used, permitting the use of categorizing strategies to code and analyze the data (Patton, 1990; Strauss & Corbin, 1997). First, the transcripts were summarized in a “digest” that identified the major themes of the responses. Using QSR International’s NVIVO 9 qualitative software, the coding of the data was conducted in three steps. First, based on the transcripts of the responses, a list of analytic areas represented in the data were composed and given a code (i.e., a “closed code”) based on relevant literature pertaining to e-health using an avatar video. Second, the primary analyst (principle investigator) reread the transcripts and identified blocks of text to be given a descriptive label (i.e., either a label from the closed code list or an original one, termed an “open code”). Next, the open-coded data were organized under and integrated into the closed code list. Third, the data under each thematic code (e.g., “empowering,” “female-controlled prevention,” “fear of side effects,” “condom use,” “perceived risk”) were re-read; and, if needed, re-coded into sub-categories in order to refine the analytic categories used. As the themes of the responses emerged, special attention was paid to data that did not confirm emerging themes, noting these for exploration in future research. In addition to using these methods of analysis, we also ensured analytic rigor by engaging several peer-reviews of early analytic claims (Charmaz, 2006). For this analysis we will focus on the questions related to PrEP.

Results

Sample Characteristics

The sample included 119 Black women who met the inclusion criteria and completed the entire survey and video. Table 1 describes demographic characteristics of the study participants. Table 2 describes the sexual risk behaviors, including their awareness of PEP and PrEP.

Qualitative Results

When asked about the perceived advantages or disadvantages regarding the use of PrEP, 53.9% of the sample responses were reflective of only advantages; 16.5% reported both advantages and disadvantages of using PrEP; 18.7% reported only disadvantages to using PrEP; and 8.8% were undecided about the use of PrEP (Table 3).

Perceived Advantages of Using PrEP

Acceptability of PrEP for HIV prevention was high among participants, with 54% of the women offering positive and enthusiastic comments regarding this new prevention technology (Table 3). Participants expressed an interest in using PrEP, which was identified as an empowering and female-controlled prevention method. Four themes emerged as perceived advantages of PrEP usage and may explain intentions to use PrEP: (1) female-controlled prevention method, (2) provides an option for women with risky sex partners, (3) option for serodiscordant couples, and (4) empowering.

Female-Controlled—Most participants expressed that PrEP was a valuable method that would allow women to protect themselves from HIV infection without dependence on their male sex partners to use condoms. One woman stated that *“it’s a great way to help women; particularly Black women take more control of their sexual health.”* Some indicated that PrEP would provide additional protection, along with the use of condoms. The women expressed that the main benefit to use PrEP and the reason for future adoption of PrEP, was that it was a female-controlled prevention method. A female controlled method is considered to be important for women who are in unhealthy relationships where there is a power imbalance and negotiating condom use with sex partners is not feasible. One woman expressed that women in unhealthy relationships, still need an option for HIV prevention when condoms is no longer a choice. *“While there is still much to do on the social/emotional side of why one might need to take PrEP. I think it is good for women to have an option they can be responsible for when their partner refuses to be responsible.”* Another participant considered PrEP an *“alternative for women to protect themselves if they maybe in an abusive relationship.”* The participants acknowledged that demanding condom use from a boyfriend or husband is not realistic if a woman is in an abusive relationship, but the option of using PrEP may decrease their risk of HIV infection.

Option for Women with Risky Sex Partners—Many women expressed that PrEP would be a viable option for women who have sex partners that would be considered risky, including men who refuse to use condoms, have co-current sex partners, cheat within exclusive relationships, or abusive to their sex partners. The women in study acknowledged that there are women who are in relationships with men who have co-current partnerships which places them at higher risk for HIV infection. One woman indicated:

If you are in a long term relationship and having sex without a condom and you feel or know your partner is having sex with others, PrEP is great. PrEP is very in need to all women. I don’t see any disadvantages of it, only advantages. It helps save lives of women who are insecure or who are in cheating relationships.

Some expressed that PrEP was not for all women but should be recommended to women in unhealthy relationship. Another woman mentioned

I would only recommend it to women in abusive relationships as an alternative to protect themselves. Women in unhealthy relationships where infidelity is rampant should also consider this drug as a preventive measure for their health and future.

The participants also expressed that PrEP was not only good for women who had unfaithful or abusive partners, it is also protective for those who have casual sex partners. One woman commented: *“I like that PrEP gives women in monogamous relationships with men who cheat some kind of peace of mind. It is also good for those who may find themselves in one night stand situations.”*

Option for Serodiscordant Couples—PrEP was considered an option for HIV-negative women who wanted to have a baby with their HIV-positive partner. “For those with an HIV positive partner or who are apart of communities with higher risk, this is helpful. Especially if you want to have a baby.” The women expressed that serodiscordant couples could potentially utilize a combination approach to HIV prevention that includes PrEP for the HIV-negative partner to reduce the chance of transmission.

Empowerment—PrEP was viewed as an HIV prevention option that has the potential to promote empowerment and self-efficacy among Black women regarding their sexual health. One woman said, “Self-care is preventative measures. This is a mature and empowering approach for a woman who is in a relationship with a partner who is not willing to use preventative measures.” Another woman stated that *“protecting yourself and health is always an advantage, so PrEP is definitely a helpful choice.”* The women expressed that the use of PrEP could increase one sense of self-control where health risks are high (e.g. unfaithful partner). One participant indicated that PrEP is “definitely an advantage for girls and women in difficult situations to have this as a choice to protect themselves.” PrEP is considered to be a safe sex method that will allow women to overcome challenges and obstacles that they may encounter in sexual relationships.

Perceived Disadvantages of Using PrEP

Twenty-two participants offered exclusive negative views of PrEP reporting that the drug was complicated and burdensome. In addition, participants expressed that they feared PrEP would increase riskier sex behavior. Five themes emerged when examining the disadvantages of PrEP: (1) complexity of the choice, including testing burden, side effects, and adherence, (2) encourages sex with risky partners, (3) increases burden on women, (4) concerns for promoting unprotected sex, (5) newness of the drug, and (6) medical mistrust and stigma.

Complexity of the Choice—Several participants expressed that the side effects, the need for continuous testing (HIV, kidney, etc.), and required daily adherence was a disadvantage to using PrEP. They expressed concern that there was “no clear end date for taking the medication and there was frequent testing that needed to happen to ensure your status.” One of the major issues is that the individual will have to adjust their life to regular follow up medical care which includes lab work and HIV testing. “The process seems very involved and that is kind of discouraging” for women who may be interested in starting PrEP. Even among the women who saw the benefits of PrEP, they were concerned that the side effects made PrEP unsafe for long-term use. One participant remarked that PrEP is “helpful but the side effects are scary.” Some women would rather use other methods to protect themselves from HIV infection than expose themselves to the side effects associated with PrEP usage.

One woman who did not feel that there were any benefits to using PrEP stated, “I can protect myself. Side effects are dangerous, so it is not worth it.”

Encourage Sex with Risky Partners—Participants expressed that having a medication like PrEP would encourage women to remain in relationships with men who place them at high risk for HIV infection, especially in relationships where fidelity was an issue. They were critical of women who would consider taking PrEP instead of leaving unhealthy relationship. One woman expressed, “I don’t agree with taking PrEP but still consciously engaging in high risk behavior.” She and others felt that “women should get out of those situations with risky men instead of continually taking a drug with side effects that could harm them in the long run.” Of particular concern were the women who may use PrEP as an excuse to remain in unhealthy relationships and not address the infidelity or abuse problems that are leading them to take PrEP: “I would prefer to see people minimize risk rather than taking this medication. I think if one’s partner refuses to use condoms, one should rethink the relationship.”

Burden for Women—Some participants expressed that women have too much responsibility already when it comes to sexual health in relationships, since they are responsible for hormonal birth control methods (e.g. birth control pill). They also acknowledge that along with taking PrEP, they would still have to use a condom to prevent transmission of other STIS. One woman responded, “That’s too much to do. Take the pill, get tested, and still use condoms & birth control. Too much for women to have to deal with on top of everything else going on their life.” The use of condoms, birth control pills, and PrEP was viewed to be burdensome for women. The requirement to take PrEP daily caused one woman to be cautious about accepting PrEP as a HIV prevention method for herself, as demonstrated in this comment:

What this pill can do is amazing but it is hard for me to imagine taking a pill for the rest of my life, maybe a shot every couple of weeks but not a pill. But you do have to do what you have to stay healthy and live as long a life as possible.

Even though the requirement to take a pill everyday was overwhelming for some of the participants, they were also able to discuss ways that would make it practical in their life, which is similar to other hormonal birth control methods (e.g. birth control patch). As one participant summarized, “Downside is having to take the medication every day, depending on how it is administered; I think it would be great if it was a patch instead.”

Promote Unprotected Sex—Participants also expressed that PrEP may increase riskier sex behavior because women would not feel that they need to use a condom. One woman shared, “I think it’s a great idea. I just hope people don’t decide not to use condoms just because they can get this.” Another woman explained her concern, “My thoughts are some women might stop using condoms because they feel that there is PrEP and they are not at risk for HIV as long as they have the medication.”

It was noted by one participant that someone who does not use condoms may also not want to use PrEP, “I think it may be a good idea but chances are that someone who doesn’t use condoms wouldn’t seek out and use PrEP.”

Newness of the Drug, Medical Mistrust, and Stigma—Participants were concerned about the lack of awareness of the drug amongst the public and the effects that long-term usage of PrEP would have on the body and the monetary cost. Generally, the participants wanted more information on PrEP to help them make a decision: One woman indicates,

I'm undecided about PrEP because I'm not sure who exactly it would appeal to. Anyone who is at long-term risk for getting HIV doesn't sound like someone who would have the funds to afford this medication indefinitely, especially because it's not always covered by insurance.

For many participants, this study was the first time that they heard about PrEP and that it was the first that it was presented for women and not just MSM. One woman stated, "I had only heard that it could be used by homosexual men." In addition, participants did not trust taking a drug for HIV prevention because of their general mistrust of the healthcare system. "I am hesitant to trust any pharmaceutical, especially those specifically targeted at a particular demographic." Participants were also concerned about being associated with taking PrEP for HIV prevention: "The stigma related to having the drug show up on my insurance and at the pharmacy level is enough to not make me want to take it"

Discussion

This paper addresses current HIV prevention issues confronted by Black women and how PrEP factors into their lives. Being a female-controlled prevention method that provided an option for women with risky sex partners and for those who are in a serodiscordant relationship was perceived to be a source of empowerment. Previous research has shown that Black women are more likely to be infected by a steady or main sexual partner and less likely to use condoms with these partners than with a casual sexual partner (El-Bassel, Caldeira, Ruglass, & Gilbert, 2009; Paxton et al., 2013), because of the belief that "known partners are safe partners". Negotiating safer sex when a partner does not have favorable attitude towards using condoms, and when the suggestion of condom use introduces questions of infidelity, it becomes increasingly difficult to negotiate safer sex practices with gender power imbalances in relationships (Paxton et al., 2013). Another advantage of PrEP expressed by the participants is that it is beneficial for women who are in serodiscordant relationships. PrEP is a potential option for women in serodiscordant relationships with more choices for primary prevention and reproductive health (McMahon et al., 2014). PrEP offers protection from HIV transmission as an additional, less invasive option for serodiscordant couples with reproductive planning interests.

The participants expressed several concerns regarding the use of PrEP relating to the complexity of the choice, including testing burden, side effects, and the necessity for adherence. Previous studies have identified effectiveness, side effects, and cost associated with PrEP as potential barriers to initiate the use (Al-Tayyib et al., 2014; Auerbach et al., 2015; Galea et al., 2011). In addition, the newness of the drug fostered feeling of mistrust of the healthcare system and stigma associated with HIV. These findings are similar to a previous study with a predominately Black women sample, where the results from the focus group identified a lack of community awareness, confusion about PrEP, stigma, discrimination, and mistrust of healthcare provider as a barrier to using PrEP (Auerbach et

al., 2015). The participants also expressed that PrEP may be an additional burden in the lives of women who already face complex issues related to their sexual health. Findings from VOICE-C, a qualitative exploratory ancillary study with women in a clinical trial exploring the efficacy of PrEP showed that the unknown efficacy of PrEP and the risk of stigmatization by their partners and significant other because of its connection to medications that are used by HIV-positive individuals hindered their adherence to PrEP along (van der Straten et al., 2014). Participants in the current study were also concerned that PrEP would encourage women to have sex with risky partners and promote unprotected sex. Data from a previous study examined the effectiveness of PrEP among heterosexual serodiscordant couples, also showed that the HIV-negative partners showed no significant increase in risky sexual behavior, even when they know they are protected by their use of PrEP (Mugwanya et al., 2013).

The findings from this study reflect women's perceptions of how PrEP can empower Black women to take control of their health and their sex lives. This prevention method may not be the answer for all women, but PrEP was viewed as a viable option for HIV prevention. The women in the sample felt empowered by the knowledge that they received about PrEP. They acknowledged that protecting their sexual health is important and having access to resources and tools that will protect them from HIV infection are necessary for all women. PrEP is the only female-controlled HIV prevention method besides the female condom. In addition, PrEP can be taken without a partner's knowledge, which is important for women who may be in abusive situations where it would not be safe for their partner to know. Empirical studies have shown that rather than adding to the burdens of what women normally need to negotiate with their partners and raising the risk of emotional or physical retribution, it may be beneficial for them to also have access to a female-initiated safer sex method so that they would not be dependent on their male partner to use a condom (Gollub, 2000).

While PrEP encourages empowering, female-driven strategies, some participants expressed that taking these medications can be disempowering and can create a learned helplessness and dependence on unhealthy relationships/contexts. These themes of self-control, self-discipline and personal responsibility may also stigmatize women (Sacks, 1996) and create a discourse suggesting that those who have HIV are responsible for their own illness. The ideology of personal responsibility, thus works to focus blame on those who are "guilty" for their illness, and to deflect attention away from the social context of the spread of disease. The idea that a disciplined body uses sex and intoxicants in a controlled and socially acceptable way has fueled HIV stigma in the Black community and provides people with a false sense of risk perception, because of the view that only individuals who were not responsible and engaging in risky behaviors would be at risk for HIV infection (Duffy, 2005; Logie, James, Tharao, & Loutfy, 2013; Paudel & Baral, 2015; Sowell et al., 1997). This perception of controlled and socially acceptable engagement is particularly gendered as social conceptions around proper womanhood dictate that women conform to expectations of sexual purity and moral innocence (Brown, Lumley, Small, & Astbury, 1994; Burke, 2002; Gunn & Canada, 2015; Raddon, 2002; Sanders, 2014). Unfortunately this further heightens their risks as these societal norms can lead to decisions not to seek sexual health services and prevention tools due to threats of stigma (Spooner et al., 2016; Thetford, 2004; van Olphen, Eliason, Freudenberg, & Barnes, 2009). These risks of stigmatization may be

particularly relevant to this sample as previous studies show women with drug use histories often experience and anticipate stigma attached to their drug use and how it's linked to being at risk of HIV (Sanders, 2014; Spooner et al., 2016). This position also deflects attention away from the structural context that may make it more difficult for women to avoid infection, including poverty, illness, and disempowerment, and systematic inequalities that characterize Black American's experience in the U.S. A focus on the social context in which many Black American women live, may illustrate how difficult it can be for women to take control of certain aspects of their lives (El-Bassel et al., 2009; Newsome & Airhihenbuwa, 2013; Newsome, Davis, & Dinac, 2015; Paxton et al., 2013). Previous research has shown that Black American women may find it difficult to protect themselves from HIV if they live in areas with a significant disproportion number of the available sex partners, use drugs, and experience poverty due to chronic high rates of unemployment and underemployment (El-Bassel et al., 2009; Newsome & Airhihenbuwa, 2013; Thomas, Witherspoon, & Speight, 2008).

Black women are influenced by their relationships with their men and their broader social and institutional contexts (Baldwin, Brown, & Rackley, 1990). Future prevention and intervention efforts focusing on Black women must account for their HIV risks relative to the particular dynamics at play within their sexual networks along with individual, interpersonal, social, and economic determinants (El-Bassel et al., 2009; Newsome & Airhihenbuwa, 2013; Paxton et al., 2013). There are multiple drivers, such as gender ratio imbalance and low partner availability, that effect Black women's sexual risk where marriage, family, and motherhood are culturally valued and the relatively segregated sexual network presents a higher risk for HIV acquisition influencing their risk for HIV infection (e.g., desire for romantic partnerships) (Newsome & Airhihenbuwa, 2013). For this reason, the unique experience of Black women deserves a more targeted approach with any type of prevention method, including biomedical strategies such as PrEP. HIV prevention and education in the form of culturally-based approaches may be the most effective motivators for behavior change in this community (Newsome & Airhihenbuwa, 2013). Strategies aimed at increasing women's awareness of the greater risk for individuals by virtue of their belonging to a particular race and sexual network could also enhance current prevention strategies in the Black community, as Black women tend to underestimate their risk for HIV infection (Neblett, Davey-Rothwell, Chander, & Latkin, 2011). Considerable evidence exists to suggest that PrEP is effective in reducing HIV transmission with proper adherence (Baeten et al., 2012; Grant et al., 2010). It also may reach women in relationships in which other barrier methods have not been used frequently, and work to empower women in negotiating safer sex.

Limitations

These findings should be interpreted within the study's limitations. First, lay individuals may have found it difficult to comment on a hypothetical PrEP medication, as women's practices of other HIV risk-reduction behaviors when they are actually taking PrEP may be different than reported here. The use of the video, however, provided a distinct advantage over standard hypothetical questioning because participants considered their intentions within the context of risk situations that were grounded in circumstances displayed in the

video. All data were collected by self-report, which presents another limitation due to the sensitive information that was collected (such as sexual behaviors, history of sexual abuse, and substance use); and, there was no way to verify respondents' answers. Subjects may have provided socially desirable responses or, conversely, the use of an online survey permitted provision of more honest responses than via face-to-face data collection.

There may also be bias, as only those with access to a computer with Internet access could participate. This may limit the generalizability of the findings, as eligible women who had access to a computer and internet (as well as email, Facebook, or Twitter accounts) may also have had a higher socioeconomic status and/or education. Despite the fact that social media networks enhanced the dissemination of the study, it may also have biased the sample, including those with greater social media use. There may have also been a bias toward women who are more proactive in their search for information, including via social media networks.

We also explored only biomedical HIV prevention and did not ask about women's perceptions of the other preventions methods such as condoms or partner reduction. Finally, while the study design and small sample size limits generalizability to the larger community of HIV-negative Black women, the findings are likely transferable to other similar populations.

Conclusion

The question of who uses PrEP and under what circumstances is complex and shaped by multiple individual, relationship, peer, and community factors. Women's social contexts, cultural and personal beliefs, life cycle stage, personal history, and immediate social influences, as well as environmental context of risk or support for prevention, all contribute to the likelihood that women and their male partners will consider, try, and adopt PrEP as a viable prevention method. The women in the study expressed their own reluctance to use PrEP because of the lack of awareness and the nuisance of the drug among women. It is vitally important that PrEP should not solely be expected to completely prevent HIV among Black women, particularly when it faces such formidable challenges, such as if the real control in sexual relationships continues to reside in the partner, which is fueled by societal norms and society's structural barriers to good health. PrEP can expand women's choices for dual protection to the greatest extent possible if used with the male or female condom. For the growing number of women at risk of disease and unintended pregnancy, it is increasingly important to provide a wide range of choices to suit a wide range of situations. Future research must make a discursive shift from addressing whether PrEP is acceptable to developing strategies to effectively implement it among at risk populations. In addition, there needs to be room for conversation around understanding the complex relationships women are in, even when it's not overtly abusive, it may be coercive and it may be challenging to negotiate condoms. There's a need for understanding the complexities of being empowered in a sexual relationship. As one of limited options for comprehensive protection for women these complexities cannot be ignored when addressing PrEP.

Biographies

Keosha T. Bond, EdD, MPH, CHES is Health Education Specialist and Behavioral Scientist who has centered her work around the complex intersections of race, sexuality, social justice and health disparities among marginalized populations. She is the principal investigator for a formative research study that explores the barriers and facilitators to black women's use of oral pre-exposure prophylaxis (PrEP). She has extensive experience in community-based participatory research, qualitative methodology, and survey methodology.

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Table 1

Participants' demographic characteristics (N=119)

	<i>N</i>	%
Country of Origin/Birth (N=119)		
United States	110	92.4
Race/ethnicity (N=119)		
Black/African American	118	99.1
Age—Mean (STD) (N=119)		
18–24	31	26.4
25–34	30	25.3
35–44	41	34.1
45–older	17	14.3
Employment Status (N = 119)		
Employed	82	69.2
Household Income (N=117)		
Less than \$19,000	21	18.0
20,000–\$39,999	36	30.3
\$40,000–\$49,999	9	7.9
Greater than \$50,000	51	43.8
Education (N=119)		
High School or High School Equivalent	28	23.1
Some college	21	17.6
Completed Bachelors or more	71	59.3
Current Student (N=119)		
Yes	45	37.4
Relationship Status (N=119)		
Married/Domestic Partnership	31	26.4
Divorced/Separated	5	4.3
Single/Never Married	24	19.8
Committed Relationship	38	31.9
Currently Dating	21	17.6
Gender of Current Sex Partners (N=119)		
Male Only	84	92.3
Both Male and Female	7	7.7

Table 2

Participants' sexual risk behavior and substance use (N=119)

	<i>N</i>	%
Sex Partners and Condom Use		
Main Sex Partner (N=119)	10	89.0
Main partner has sex with others (n=106)		
Yes	51	42.9
I do not ask them to use condoms and I am not thinking about it	55	46.2
No condom use with Main/Steady partner in past 3 months (N=119)		
<i>Other Sex Partners(s) (N=119)</i>		
Other sex partner(s) has sex with others (N=46)	34	74.3
I do not ask them to use condoms and I am not thinking about it	8	17.1
No condom use with Other partner(s) in past 3 months	35	77.1
Substance Use (N=119)		
Currently drinks alcohol		
Yes	89	74.7
Use to, but stopped	12	9.9
Currently uses drugs		
Yes	16	13.2
Use to, but stopped	17	14.3
Used drug/alcohol while having sex	98	82.4
HIV/STI (N=119)		
HIV test in the past year	59	49.5
STI (Lifetime)	60	50.5
PEP/PrEP		
Prior knowledge of PEP	25	20.8
Prior knowledge of PrEP	22	18.7

Table 3

Feedback on Using PrEP (N=119)

	<i>N</i>	%
Perceptions of PrEP After Watching The E-Health Avatar Video		
Perceives Advantages Only of PrEP	64	53.8
Perceives Both Advantages and Disadvantages of PrEP	20	16.4
Perceives Disadvantages Only of PrEP	22	18.7
Undecided About PrEP	13	11.0

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