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Perspectives on HIV pre-exposure prophylaxis (PrEP) implementation in Mississippi among Black women and clinical staff: Recommendations for clinical trauma-informed programs

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ABSTRACT

Intimate partner violence (IPV) can constraint Black women's ability to prioritize and access Human Immunodeficiency Virus (HIV) pre-exposure prophylaxis (PrEP) services. Recent research has called for the development of trauma-informed PrEP implementation programs to improve the delivery of PrEP to Black cisgender women; however, many PrEP-prescribing settings do not reflect this recommendation. The current study sought to identify key components to develop a trauma-informed PrEP implementation program for Black cisgender women and clinical staff. We conducted focus groups with PrEP-eligible Black cisgender women (February-June 2019), and semi-structured interviews with clinical staff offering HIV prevention and treatment services (October-November 2020) in community healthcare clinics in Mississippi. Seven themes were identified as needed to facilitate integration of trauma-informed approaches into existing PrEP programs, including defining intimate partner violence (IPV), appropriate IPV screening and response, HIV prevention in abusive relationships, staff training needs, and creating supportive clinic environments. PrEP-eligible Black women and clinical staff generally agreed on how to best operationalize IPV screening and response, the importance of trauma-informed staff training, and the need for Black women-specific informational campaigns. However, Black women highlighted the need for providers to discuss HIV prevention in controlling relationships, and to respond to IPV disclosure. HIV pre-exposure prophylaxis has yet to achieve the potential impact observed in trials. Ultimately, realizing the HIV prevention potential of PrEP in the US necessitates centering the perspectives of Black cisgender women and staff to better integrate trauma-informed approaches.

1. Introduction

Intimate partner violence (IPV) and Human Immunodeficiency Virus (HIV) are two mutually-reinforcing epidemics disproportionately affecting U.S. Black cisgender women (hereafter, Black women). IPV is physical, sexual, and psychological abuse between a current or former romantic or sexual partner (Black et al., 2011; Smith et al., 2015). More than six million Black women have experienced IPV in their lifetime (Smith et al., 2015). Black women also continue to carry the highest burden of HIV infections compared to women of other racial and ethnic groups (Centers for Disease Control and Prevention, 2017b). In 2018, Black women account for 58 % of infections among U.S. women (Centers for Disease Control and Prevention, 2017a); and account for 67 % of all new HIV infections in the U.S. South, a region with the highest HIV incidence in the country (Centers for Disease Control and Prevention, 2017b). Black women at-risk for HIV endure several forms of violence

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such as sexual coercion (Gutzmer et al., 2016), childhood violence (Tsuyuki et al., 2022), and IPV (Stockman et al., 2013). IPV can increase Black women's HIV acquisition risk through forced sex, compromised condom negotiation, stress dysregulation, and increased engagement in risky sex (Stockman et al., 2013; Dunkle and Decker, 2013; Overstreet et al., 2015). Black women are navigating their HIV prevention within the context of IPV, which highlights the need for partner-independent HIV prevention options.

HIV pre-exposure prophylaxis (PrEP) is a promising partner-independent HIV prevention strategy for Black women. PrEP decreases HIV acquisition risk over 90 % through regular adherence to antiretroviral medications (Food and Administration, 2012). PrEP can be administered in oral or recently, injectable form; yet it is underutilized among U.S. Black women (Bush et al., 2016; Siegler et al., 2018). Only 7 % of PrEP-eligible women are prescribed PrEP, with a lower estimate for Black women (Bush et al., 2016).

Consistent studies have demonstrated the importance of accounting for how IPV and sociocultural factors constrain Black women's PrEP access in the context of PrEP implementation (Aholou et al., 2016; Willie et al., 2021a; Wyatt et al., 2013). First, IPV can reduce PrEP initiation (Willie et al., 2017a; Willie et al., 2017b; Garfinkel et al., 2016) and adherence among women (Roberts et al., 2016; Cabral et al., 2018). Abusive partners may use coercion to prevent access to healthcare (Willie et al., 2020), and sabotage medications (Roberts et al., 2016). Second, Black women experiencing IPV encounter institutionalized racism and sexism within the healthcare system, which can alienate women (Rosenthal and Lobel, 2016; Prather et al., 2018). Healthcare providers' biases can influence PrEP decision-making, and result in fewer PrEP prescriptions to Black patients (Calabrese et al., 2014). Extending this prior research (Calabrese et al., 2014), providers' stereotyped perceptions about Black women could also result in fewer PrEP prescriptions. Altogether, providers' biases about Black women could weaken patient-provider relationships and could impede open conversations around HIV prevention (Willie et al., 2021a) and IPV experiences.

Integrating trauma-informed principles with PrEP implementation might increase access among Black women (Willie et al., 2021b). SAMHSA defines *trauma-informed* as approaches that understand trauma's impact on settings, populations, and services while also recognize how ecological and cultural contexts shape an individual's perception and process of trauma (Substance Abuse and Mental Health Services Administration, 2014). A trauma-informed approach is rooted in four assumptions (Substance Abuse and Mental Health Services Administration, 2014): realizes that trauma has widespread impacts; recognizes the symptoms of trauma; responds to trauma; and resists retraumatization. There are six principles for when implementing trauma-informed approached (Substance Abuse and Mental Health Services Administration, 2014): individuals are physically and psychologically safe (safety); organizations are honest about operations (trustworthiness and transparency); peers can build trust and promote recovery (peer support); cross-sector partnerships can streamline processes (collaboration and mutuality); shared decision-making is supported (empowerment, voice, and choice); and organizations are responsive to the needs of gender and racial/ethnic groups and recognizes historical trauma (cultural, historical, and gender issues).

A trauma-informed approach to PrEP implementation could serve Black women by incorporating these key assumptions and principles into organizational policies and practices (Willie et al., 2021). Recent literature offered recommendations for potential trauma-informed practices in PrEP implementation including routine IPV screening and safety protocols; cross-sector collaborations with trauma-specific agencies; patient-provider conversations on limits of confidentiality; and recognition of systemic healthcare barriers among marginalized populations (Willie et al., 2021). Utilizing a trauma-informed approach to PrEP implementation for Black women may positively impact PrEP initiation by creating safe environments to discuss IPV and safety plan to enhance access.

Extant U.S. research on trauma-informed PrEP implementation remains nascent (Willie et al., 2021), but prior research suggests that IPV-related policies could positively change the HIV prevention landscape for women. A study reviewed five policies regarding IPV and the healthcare system: prohibiting healthcare discrimination; requiring IPV-related healthcare protocols; requiring IPV screenings; requiring IPV provider training; and mandatory reporting of IPV-related injuries (Willie et al., 2018). Twenty-three states had two policies. States with higher IPV prevalence were associated with higher HIV diagnoses among women, but states with several healthcare policies had a weaker IPV-HIV association compared to states with fewer healthcare policies (Willie et al., 2018). Policies addressing IPV in the healthcare system may create responsive healthcare environments that identify women experiencing IPV and act sensitively to their needs (Willie et al., 2021; Willie et al., 2018).

Nevertheless, studies have yet to identify the best way to design trauma-informed PrEP implementation to support Black women (Willie et al., 2021b). Utilizing SAMHSA's concept of trauma-informed approaches (Substance Abuse and Mental Health Services Administration, 2014), this study aims to identify key components for trauma-informed PrEP implementation from the perspectives of Black women and clinical staff.

2. Methods

Black women and clinical staff members involved in PrEP clinical services were recruited to participate in this study. Women were eligible if they: self-identified as a Black or African American cisgender female; self-reported HIV-negative status; resided in the Greater Jackson Mississippi area; had at least one substantial risk factor for HIV infection per 2017 CDC PrEP Eligibility Guidelines for heterosexually-active women (i.e., sexual partner living with HIV or status unknown, diagnosed bacterial STI, 2 or more sex partners, inconsistent or no condom use, sex work); ≥18 years, and had never taken PrEP. Clinical staff were eligible if they were: ≥18 years; had experience discussing PrEP with patients; and currently employed at a community healthcare clinic in Mississippi (e.g., nurses, social workers).

Between February 2019 and June 2019, Black women were recruited through fliers and social media (e.g., Facebook) to participate in an in-person focus group discussions (FGDs; n = 6–7 per group). Fliers informed participants that this was a study on Black women's sexual health and invited women to contact the research team. FGDs were conducted to elicit a wide range of views on PrEP among Black women in Mississippi. During FGDs, a facilitator asked participants about PrEP knowledge and uptake; IPV and trauma-informed care; and recommendations for trauma-informed PrEP programs (**Supplementary File 1**). After each FDG, the team debriefed and developed analytical memos. FDGs were audio-recorded, transcribed, and lasted on average 80 min. Participants were remunerated $50.

Between October 2020 and November 2020, clinical staff were purposively sampled from two community healthcare clinics in the Greater Jackson area and invited to complete semi-structured phone interviews (n = 3–4 per clinic). Semi-structured interviews were conducted to understand staff's personal narratives of clinical care. Participants were asked questions related to PrEP implementation: barriers to PrEP initiation and implementation; trauma-informed care; readiness for IPV protocols; and training preferences (**Supplementary File 2**). Analytical memos were created after each interview. Interviews were audio-recorded, transcribed, and lasted between 45 and 60 min. Participants were remunerated $50.

All participants provided oral consent at the outset of the FGDs and interviews. The Johns Hopkins University and Brown University IRBs approved all study procedures.

FGDs and interviews were conducted and coded by Black women from the U.S. South. Thematic analysis was used to identify and report

patterns in the interview and FDG data. This approach included both inductive and deductive coding methods. An interdisciplinary team of four coders open-coded two interviews and FGDs and discussed memos in order to develop codebooks, iteratively. The deductive codes were based upon the interview guide and research questions. When creating the inductive codes, the team thoroughly reviewed the transcripts, and created an initial set of codes and patterns that were distinct from the interview guide and research questions. During the codebook development, the appropriateness and distinctness of the inductive and deductive codes were discussed among the research team. The finalized codebook contained both inductive and deductive codes based on prior literature on IPV, PrEP implementation, and trauma-informed care. All transcripts were coded using finalized codebooks in Dedoose. Team meetings were used to discuss inconsistencies in code application and interpretation as well as prior assumptions and experiences that shaped data interpretation. The lead researcher adjudicated decisions on coding inconsistencies.

In this study, we used four criteria of trustworthiness for our qualitative analysis: credibility, transferability, dependability, and confirmability (Lincoln and Guba, 1985). To increase credibility and dependability, we conducted peer debriefings (i.e., qualitative guidance from Black and IPV survivor scholars from the U.S. South), prolonged engagement in the data (i.e., several reviews of all transcripts, intensive coding), and managed data triangulation (i.e., interviews and FGDs assessing similar constructs). We also used purposive sampling to focus on key informants to enhance transferability. Lastly, the Methods section outlines a thorough description of the research process which allows for the confirmability criteria to be met.

3. Results

Tables 1 and 2 summarizes characteristics for 37 Black women participants and seven staff members, respectively. The results sections describe seven factors informing the development of trauma-informed PrEP implementation. Table 3 displays additional quotes. Table 4 is a joint display that integrates qualitative findings with potential program components.

3.1. Defining IPV

Consistent definitions of IPV among clinical staff and Black women are crucial for identifying Black women experiencing IPV. Clinical staff and Black women participants had similar definitions for IPV. In the FGDs, women discussed how IPV is more than just physical abuse; it also encompasses mental abuse.

Table 1
Characteristics of Black Cisgender Women Who Participated in Focus Group Discussions, February 2019 – June 2019.

	N (%)
Overall	37 (100.0)
Age in years, M (Range)	32 (18 – 44)
Employment status	
Employed (full-time or part-time)	29 (80.8)
Unemployed	8 (19.2)
Annual income	
Greater than $30,000	18 (46.2)
$30,000 or less	19 (53.8)
Sexual identity	
Heterosexual	29 (80.8)
Lesbian or bisexual	8 (19.2)
Past-year access to healthcare services	
Yes	33 (90.0)
No	4 (10.0)
Ever PrEP use	
Yes	0 (0)
No	37 (100)

Table 2
Characteristics of Clinical Staff Who Participated in Semi-structured Interviews, October 2020 – November 2020.

	N (%)
Overall	7 (100.0)
Age in years, M (Range)	46 (38 – 53)
Race and Ethnicity	
Black	7 (100 %)
Gender	
Women	6 (88.9)
Men	1 (11.1)
Clinical Roles	
Program Director	2 (46.2)
Nurse	2 (46.2)
Social Worker	2 (46.2)
PrEP Navigator	1 (46.2)

One of the Program Directors was also a Nurse Practitioner.

> Participant 1: "But some people really don't know what domestic violence is other than just hitting."
> Participant 2: "Right [just] hitting."
> Participant 1: "Yeah. It's verbal. It's mental."

Clinical staffs' definitions aligned with Black women. Some staff also elaborated on the definition of IPV to include financial abuse. Staff Member 5 states "They'll probably have the conversations about fighting, [but] just explaining to them that abuse is not just physical. It could be financial. It could be emotional. You see them talking to you in a degrading manner and those kind of things. Not respecting, not giving them money to pay the bills…that's control."

3.2. Clinical screening practices

Participants discussed the importance of screening for IPV in clinics as well as differences in screening practices across clinics. Overall, Black women patients thought it was acceptable and appropriate for clinical staff to screen for IPV.

> Participant 1: "Some people gonna be scared to talk and tell somebody. So if a doctor asks them, you know, they'll probably be a little bit more comfortable, especially if they talk to them about their problems all the time."

In this study, some Black women patient participants further explained that clinical staff are trusted resources for women experiencing IPV and may help women safely leave their relationship.

Participant 1:	"I think that's a good idea because a lot of people are afraid to talk about it if they're real life going through, and maybe they talking to their doctors, somebody they feel close to, might be able help them out in a situation of getting out of domestic violence."
Participant 2:	"That's very amazing because it's one of the questions that come up in one of my [visits]. They ask the question "Do you feel safe or is there [anyone] you know whose being violent towards you or that you feel like you're in harm's way?"

Clinic staff discussed screening protocols and barriers. In particular, competing priorities with other health needs reduces time to discuss IPV with patients. For example, Staff Member 5 shares "We have so many competing priorities that we have to do. We've got to check out this box for Medicare/Medicaid, got to check off this box for ACO, you've got to check off this box for something else. I think sometimes the pertinent things, like IPV, get kind of lost in the South."

3.3. Responses to IPV disclosure

Both Black women and clinical staff participants discussed the potential implications of disclosing IPV in a clinical setting. In particular, Black women addressed the sociostructural ramifications of disclosing these experiences.

Table 3
Themes and Additional Illustrative Quotes: Black Women and Clinical Staff, Mississippi, 2019 and 2020.

	Illustrative Quotes	
Themes	Focus Groups with Black Women (February-June 2019)	Interviews with Clinical Staff (October-November 2020)
Comprehensive Definition of IPV	Women also discussed sexual abuse as another form of IPV. *Participant 1: "But it doesn't necessarily have to be physical."* *Multiple Participants: "Sexual abuse."*	
Clinical Screening Practices	Some participants discussed how clinical staff could be a trusted resource for women experiencing IPV and enable women to safely leave their relationship. *Participant 1: "I think that's a good idea because a lot of people are afraid to talk about it, and maybe [if] they talk to their doctors, somebody they feel close to, [it] might be able help them out [of] a situation of domestic violence."*	Readiness to conduct IPV screening is another important barrier in clinics. Some clinic staff members discussed their reluctance to perform IPV screening. *Staff Member 3: "I don't [screen for IPV] unless there is a reason for me to ask that question. It's not a normal, day-to-day."*
Training Preferences and Needs		Staff saw value in a program that trained staff to recognize IPV among patients who are eligible for PrEP. *Staff Member 7: "I think that it would be a wonderful thing to have it [integrated program] because you do need to offer PrEP. You need to educate the patient on the use of PrEP. You do need to adhere and know that these patients are—they may not, from the beginning, tell you they are a victim of domestic violence, but as you build a rapport, you will begin to learn that they are."*
Informational Campaigns		Clinical staff also believed it could be beneficial to disseminate information in unconventional places. Information about IPV located where women could safely read them could be another avenue to spread awareness. *Staff Member 3: "I went somewhere and they had information about IPV in the women's bathroom. They have a number that they can call while they're in there and then they alert staff to know, "Hey, this is going on," and the woman doesn't have to say anything. It was phenomenal and I liked it."*

> Participant 1: "Because a lot of women don't want people to know they're being abused. Or if they tell it, and that partner get in trouble, they're gonna abuse them again."

In the FGDs, women shared some barriers to IPV disclosure in healthcare settings. First, patients may be reluctant to disclose IPV due to potential violent retaliation from their partner. Specifically, patients may fear that abusive partners will learn about the disclosure and use violence to against them. Second, FGD participants also noted that some patients do not want to disclose or share their abusive experiences.

Black women who participated in the FDGs also discussed how the justice system responds to Black women during an incidence of partner violence.

> Participant 1: "I've actually been in an [abusive] domestic relationship. I was arrested for it as well. The way it happened; he was hitting me first…"
> Multiple Participants in agreement.
> Participant 1: "He called the police and he said I was trying to murder him, but I got the bruises. They ended up arresting us both."

The intersections of structural racism and sexism have led to a disparate difference in lived experiences of survivors engaging with justice system about IPV. Specifically, Black women are likely to be viewed as an "aggressor" during IPV disclosure, leading to dual arrest which disproportionately affects Black women experiencing IPV (Jacobs, 2017). These experiences may thwart women's ability to engage in formal help-seeking behaviors.

Clinical staff outlined strategies used to encourage disclosure and link patients to services. In this narrative, Staff Member 5 states "If there is a positive assessment for IPV, we have a Licensed Certified Social Worker (LCSW) and the Licensed Masters Social Worker (LMSW) on staff. The nurse can refer them to them for resources…We just tell them, 'If it gets this bad, let's have a plan, you know? Take a bag somewhere. Get your papers together, where he can't [find it]." After a patient discloses IPV, a clinical social worker is available to conduct safety planning such as gathering important documentation when she is ready to leave the relationship, in addition to providing access to additional resources.

3.4. *HIV prevention in controlling relationships*

FGD participants described gender-based power imbalances that constrain women's autonomy in relationships.

> Participant 1: "Because he can go out there and do whatever he wanna do and not expect you to [do anything]."
> Participant 2: "Domestic violence because he's out here [and] she's at home."
> Multiple Participants in agreement.
> Participant 1: "And now, he's bringing X, Y, Z back to her, and she mad."
> Participant 3: "Girl at high risk not only for HIV, but for STDs."
> Multiple Participants in agreement.

FGD participants discussed how controlling male partners engage in sexual concurrency and acquire sexually transmitted infections like HIV but use isolation tactics to prevent female partners from engaging in similar sexual behaviors.

FGD participants also discussed how economic dependence can constrain women's power to use condoms.

> Participant 3: "It depends on where their resources come from – so where their money and their light bill comes from. If you don't want me to use a condom, then I won't because I won't say anything because I need you to help me.
> Multiple Participants in agreement.
> Participant 3: "You've got to go get the money."
> Multiple Participants in agreement.
> Participant 5: "You have to accept what comes with it."
> Participant 1: "You can't afford it without him."

In this discussion, participants share how Black women are forced to choose between HIV prevention or economic security, specifically in

Table 4
Joint Display Integrating Trauma-Informed Components into PrEP Implementation with Qualitative Findings from PrEP-Eligible Black Women and Clinical Staff in Jackson, Mississippi.

Program Structure		**Qualitative** Narrative + Example Quotes	
Level	Components	Focus Groups with Black Women (February-June 2019)	Interviews with Clinical Staff (October-November 2020)
Provider	Comprehensive Definition for IPV	IPV includes mental abuse: *"But some people really don't know what domestic violence is other than just hitting. Yeah. It's verbal. It's mental."*	IPV includes financial abuse as well: *"They'll probably have the conversations about fighting, [but] just explaining to them that abuse is not just physical. It could be financial…"*
	Clinic Screening Practices	Shared positive thoughts: *"I think it is a good idea, some people may be scared to talk about it. If a doctor asks them, then they'll probably feel more comfortable to disclose"*	Expressed competing clinic interests other than IPV screening and reluctancy in discussing IPV with patients: *"I don't unless there is a reason for me to ask, it's not a normal day-to-day [conversation]"*.
	Responding to IPV Disclosure	Discussions addressed the sociostructural ramifications that women endure when they share these experiences: *"He called the police and he said I was trying to murder him, but I got the bruises. They ended up arresting us both."*	Clinical staff participants outlined the adaptive strategies used to encourage disclosure and link patients to wraparound services. *"If there is a positive assessment for IPV, we have a LCSW and the LNSW on staff. The nurse can refer them to them for resources…We just tell them, 'If it gets this bad, let's have a plan, you know? Take a bag somewhere. You know, get your papers together, things like that, where he can't [find it]."*
	HIV prevention in the Context of Abusive Relationships	Gender-based power imbalances constrain women's autonomy in controlling relationships: *"Because he can go out there and do whatever he wanna do and not expect you to [do anything]." "And now, he's bringing X, Y, Z back to her, and she mad."*	
	Service Coordination for IPV Experiences	PrEP-eligible Black women discussed the need for a reliable, responsible staff member who can be trusted. *"These kids need a specified nonchanging contact. So that they can know, well, when I'm experiencing this, on any given day [and] I want to get help for myself or find out what love is so that I can see myself in five years showing some type of growth. I need to have it accessible to me"*	Staff members conversed about several trauma-informed approaches including developing a safety plan to help patients weigh their options. *"A lot of times, I assist a woman and they don't wanna leave due to financial reasons, due to children… 'I can't afford [to leave].' I completely understand, and I tell them, but I make sure that they have a safety plan and numbers that they can call if they should need help."*
	Training Preferences	Discussed the perceived utility of the program, and they agreed that doctors could serve as an authoritative figure whom women would listen to. Hearing doctors talk about other patients who had gotten on PrEP also could serve as a motivator for these women.	Clinical staff members discussed the virtues of in-person sessions. They also found other methods of learning, such as roleplay, take-home materials, and assessments, to be beneficial in addressing this content.
Clinic Environment	Informational Campaigns	Black women participants expressed a desire for their providers to offer more education on the topic in the form of verbal communication and through informational materials.	Stated that pamphlets with information on domestic violence could serve as a useful tool to assist patients and offer support.

relationships where she depends on her partner for finances. Controlling how finances are utilized in a relationship is form of economic abuse that may impact women's autonomy in their sexual relationships. This theme was identified in the FGDs with Black women patients, and underscores the importance of discussing these intersecting experiences during IPV screening encounters with healthcare staff.

3.5. IPV service coordination

Both Black women and clinical staff discussed the importance of connecting individuals experiencing IPV to community resources. Black women discussed the need for a reliable, trustworthy staff member.

> Participant 1: "I think we need more women and men liaisons that these [people] can really trust."
> Participant 2: "Trust."
> Participant 3: "And relate to."
> Participant 1: "The [community] needs a specified nonchanging contact. So that they can know, well, when I'm experiencing this, on any given day [and] I want to get help for myself or find out what love is so that I can see myself in five years showing some type of growth. I need to have it accessible to me."
> Multiple Participants in agreement.

After IPV disclosure, a social worker ensures that patients has access to basic, fundamental human rights such as housing and food. For example, Staff Member 7 shares "You got to go through the social worker. She would go through the steps and that will lead to placing the patient into a safe situation. Sometimes, that includes locating housing and food for her and if she has children, just trying to get them in a safe place."

3.6. Training preferences and needs

Black women and staff discussed the necessity of PrEP and IPV training programs as well as their implementation preferences. A FGD participant states,

> Participant 1: "It just depends on the doctor-patient relationship. Just make sure they're comfortable with them and able to talk with them about anything – just bringing that question or look for signs and symptoms."

In general, FGD participants expressed that healthcare staff need to be trained to recognize IPV and build rapport with patients. From the patient's perspective, healthcare staff need to be able to identify the signs of abuse, create an environment where there is mutual respect and rapport before starting the conversation about healthy relationships.

Aligned with the FGDs, healthcare staff shared in their interviews their insights on the best methods for disseminating this type of training. For example, Staff Member explains "I did attend an in-person seminar on domestic abuse, and that was great. We had an instructor. It was a group of us in a classroom. We had educational materials to bring home. We roleplayed with each other, practiced with each other on our assessments." Altogether, in-person training sessions were also best, and roleplay activities were equally beneficial.

3.7. Informational campaigns

In FGDs, Black women discussed their expectations from staff regarding IPV and PrEP implementation.

> Facilitator: "So what should physicians be doing more of?"
> Participant 1: "Speaking on it."
> Participant 2: "Letting it be known."
> Multiple Participants: "Educating."
> Participant 3: "Putting it out there."
> Participant 4: "And if they're not gonna speak on it, can we at least see some pamphlets?"

Altogether, women shared their desire for more verbal communication and information regarding PrEP and IPV from healthcare staff. From their discussions, health education can be disseminated during a patient-provider encounter and through informational pamphlets.

Similarly, clinical staff echoed patient's perspective regarding informational campaigns. For example, Staff Member 7 states "Anything that educates people to make people better, I think is wonderful because some women don't know a healthy relationship…You should have pamphlets. We should have a way to let the people know. Let women know that: "You don't have to live like this, and we can offer you this."

Pamphlets on IPV and PrEP would be useful tools for assisting patients and offering support.

4. Discussion

This study aimed to inform the development of trauma-informed PrEP implementation with perspectives from Black women and clinical staff engaged in HIV prevention services in Mississippi. Utilizing SAMHSA's framework of trauma-informed approaches (Substance Abuse and Mental Health Services Administration, 2014), our findings identified seven components needed to support a trauma-informed approach to increase PrEP initiation among Black women.

Trauma-informed approaches use four assumptions including realize; recognize; respond; and resist (Substance Abuse and Mental Health Services Administration, 2014); and study participant narratives highlighted three assumptions. First, Black women discussed their realization of the trauma impacts during their conversations on HIV risks and prevention in controlling relationships. Specifically, partners may use coercion and violence to distort relationship power and impede women's sexual autonomy and use of HIV prevention. Second, recognizing the signs and symptoms of trauma, specifically IPV, was critical. For example, Black women and staff participants discussed the need for comprehensive IPV definitions (moving beyond the IPV stereotype of strictly physical abuse (Dutton, 2012)) in clinical encounters to recognize trauma. Without comprehensive IPV definitions, women's experiences of trauma as IPV may go overlooked. While there was congruency about IPV definitions, Black women and clinical staff had different views about clinical IPV screening, a tool used to identify signs of trauma. For example, Black women supported IPV screening, partially because it signaled that staff cared about their wellbeing. However, some staff were reluctant to conduct IPV screening because it's outside their scope of practice. This tension about screening is consistent with prior research (Alvarez et al., 2018). Lastly, trauma-informed approaches should respond to trauma. Black women participants discussed several trauma responses that women may endure including being fearful to discuss their trauma. Staff shared detailed steps of how their clinic responds to women disclosing IPV. For example, staff outlined connecting women to social workers, conducting safety planning, and warm handoffs to other resources like housing. In the context of PrEP implementation, trauma-informed approaches might facilitate PrEP initiation by creating safe spaces to discuss trauma's impact on relationships and HIV prevention. Staff need training to understand how controlling relationships can increase HIV risk for Black women (Willie et al., 2021b; Caplon et al., 2021). Trauma-informed approaches would also include comprehensive IPV definitions that resonate with Black women and staff; in addition to change staffs' attitudes to address hesitancy to manage IPV among patients.

Discussions with Black women and staff participants did not underscore the resist assumption of trauma-informed approaches. There was little discussion on how organizations mitigated re-traumatization. While re-traumatization was not explicitly discussed, it is possible that policies supported organization-wide collaboration such that women who disclosed IPV to staff would not have to repeat their trauma

histories to a social worker during the warm handoff. A trauma-informed approach to PrEP implementation could resist re-traumatization by ensuring that trauma histories are not repeated during PrEP candidacy assessments (Willie et al., 2021b).

In this study, themes also overlapped with four of the six SAMHSA's principles of trauma-informed approaches (i.e., safety; trustworthiness and transparency; empowerment, voice, and choice; and cultural, historical, and gender issues) (Substance Abuse and Mental Health Services Administration, 2014). Regarding IPV disclosure and service coordination, staff discussed safety planning with their patients, which facilitated a safe environment for survivors. Black women and staff also discussed elements of trustworthiness. Moreover, Black women participants shared how a trusting patient-provider relationship was important during IPV screening and service coordination. The principle of empowerment, voice, and choice was also delineated in the training preferences and informational campaign themes. Black women provided recommendations for designing programs and materials to benefit women. These recommendations included ensuring staff were trained to have open conversations with women before discussing IPV; and more education and written materials on PrEP is needed. Finally, our FGDs noted potential ramifications of IPV disclosure, which aligns with the principle of cultural, historical, and gender issues. Understanding the ecological and cultural context of IPV is pivotal, as Black women in our study shared their experiences of being arrested with their partner after disclosing IPV (Jacobs, 2017; Bent-Goodley, 2009). The high prevalence of dual arrests among Black IPV survivors compared to survivors in other racial/ethnic groups is largely driven by institutionalized racism and sexism (Jacobs, 2017; Bent-Goodley, 2009). These systems of power invalidate Black women's survivorship by fostering stereotypes that depict Black women as aggressive and non-feminine (Taft et al., 2009), which can result in discrimination after IPV disclosure and thwart service coordination. For PrEP implementation, a trauma-informed approach may ensure that safety planning and protocols are in place for women to disclose without their partner being in the examination room (Willie et al., 2021b). To promote trustworthiness and transparency, staff should establish rapport with patients, and discuss any limits to confidentiality before conducting IPV screening (Willie et al., 2021b). Organizations can work with Black women to create opportunities that prioritize women's needs and choices. Staff can also be trained on the sociocultural context of IPV and to recognize their biases in PrEP decision-making.

Two of the six SAMHSA's principles of trauma-informed approaches were not identified in our findings: peer support, and collaboration and mutuality. The sensitivity of the topics might have prevented conversations on peer support from emerging in the FGDs. Additionally, the limited discourse on collaboration may reflect the realities of cross-sector partnerships in rural areas. Limited transportation and driving long distances can impede care in rural areas (Henning-Smith, 2020). Thus, opportunities to have external collaborations (e.g., handoffs to trauma-specific organizations) may be difficult to sustain. To address these principles, a trauma-informed approach to PrEP implementation could create a peer support group and use telehealth to connect women to external trauma-specific organizations.

Some study limitations merit consideration. Purposive sampling is common in qualitative research and allows for the "selection of information-rich cases" (Henning-Smith, 2020), yet there might have been differences between women who chose to participate in or be more vocal during FGDs compared to those who did not. Sensitive topics were discussed in the FGDs which could have affected women's participation. Facilitators were trained to recognize these situations and encouraged active participation from group members. FGDs are also susceptible to social desirability bias in a group setting. Caution should be taken when comparing findings between FGDs and interviews. Our study was conducted in Mississippi which may limit the transferability of our findings.

5. Public Health Implications

Black women are experiencing co-occurring epidemics of HIV and IPV, yet the development of trauma-informed PrEP implementation is stagnant. A trauma-informed approach could enhance PrEP initiation among Black women by showing that staff are not only trusted sources of HIV prevention education, but also are capable of helping women navigate prevention in the context of IPV.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data that has been used is confidential.

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Appendix A. Supplementary data

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References

Aholou, T.M., Murray, A., Sutton, M.Y., 2016. The social, structural, and clinical context of HIV prevention and care for Black/African American and Hispanic Women/Latinas in the United States. In: Understanding the HIV/AIDS Epidemic in the United States. Springer, pp. 131–175.

Alvarez, C., Debnam, K., Clough, A., Alexander, K., Glass, N.E., 2018. Responding to intimate partner violence: Healthcare providers' current practices and views on integrating a safety decision aid into primary care settings. Res. Nurs. Health 41 (2), 145–155.

Bent-Goodley, T.B., 2009. A black experience-based approach to gender-based violence. Soc. Work. 54 (3), 262–269.

Black, M.C., Basile, K.C., Breiding, M.J., et al., 2011. National Intimate Partner and Sexual Violence Survey. Centers for Disease Control and Prevention, Atlanta, GA.

Bush, S., Magnuson, D., Rawlings, M.K., Hawkins, T., McCallister, S., Mera, G.R., 2016. Racial characteristics of FTC/TDF for pre-exposure prophylaxis (PrEP) users in the US. ASM Microbe/ICAAC.

Cabral, A., Baeten, J.M., Ngure, K., et al., 2018. Intimate partner violence and self-reported pre-exposure prophylaxis interruptions among HIV-negative partners in HIV serodiscordant couples in Kenya and Uganda. JAIDS J. Acquired Immune Def. Syndromes. 77 (2), 154–159.

Calabrese, S.K., Earnshaw, V.A., Underhill, K., Hansen, N.B., Dovidio, J.F., 2014. The impact of patient race on clinical decisions related to prescribing HIV pre-exposure prophylaxis (PrEP): assumptions about sexual risk compensation and implications for access. AIDS Behav. 18 (2), 226–240.

Caplon, A., Alexander, K.A., Kershaw, T., Willie, T.C., 2021. Assessing provider-, clinic-, and structural-level barriers and recommendations to pre-exposure prophylaxis (prep) uptake: a qualitative investigation among women experiencing intimate partner violence, intimate partner violence service providers, and healthcare providers. AIDS Behav. 1–12.

Centers for Disease Control and Prevention. HIV Among Women. 2017; https://www.cdc.gov/hiv/pdf/group/gender/women/cdc-hiv-women.pdf. Accessed 10/18/2017, 2017.
Centers for Disease Control and Prevention. *HIV among African Americans.* Atlanta, Georgia, 2017.
Dunkle, K.L., Decker, M.R., 2013. Gender-based violence and HIV: Reviewing the evidence for links and causal pathways in the general population and high-risk groups. Am. J. Reprod. Immunol. 69 (s1), 20–26.
Dutton, D.G., 2012. The prevention of intimate partner violence. Prev. Sci. 13 (4), 395–397.
Garfinkel, D.B., Alexander, K.A., McDonald-Mosley, R., Willie, T.C., Decker, M.R., 2016. Predictors of HIV-related risk perception and PrEP acceptability among young adult female family planning patients. AIDS Care 1–8.
Gutzmer, K., Ludwig-Barron, N.T., Wyatt, G.E., Hamilton, A.B., Stockman, J.K., 2016. "Come on baby. You know I love you": African American women's experiences of communication with male partners and disclosure in the context of unwanted sex. Arch. Sex Behav. 45 (4), 807–819.
Henning-Smith, C., 2020. The public health case for addressing transportation-related barriers to care. Am. J. Public Health. 110 (6), 763.
Jacobs, M.S., 2017. The violent state: black women's invisible struggle against police violence. Wm & Mary J Women & l. 24, 39.
Lincoln, Y., Guba, E.G., 1985. Naturalistic inquiry. Sage, Newbury Park, CA.
Overstreet, N.M., Willie, T.C., Hellmuth, J.C., Sullivan, T.P., 2015. Psychological intimate partner violence and sexual risk behavior: examining the role of distinct posttraumatic stress disorder symptoms in the partner violence-sexual risk link. Womens Health Issues 25 (1), 73–78.
Prather, C., Fuller, T.R., Jeffries IV, W.L., et al., 2018. Racism, African American women, and their sexual and reproductive health: a review of historical and contemporary evidence and implications for health equity. Health Equity. 2 (1), 249–259.
Roberts, S.T., Haberer, J., Celum, C., et al., 2016. Intimate partner violence and adherence to HIV pre-exposure prophylaxis (PrEP) in African women in HIV serodiscordant relationships: A prospective cohort study. J. Acquir. Immune Defic. Syndr.
Rosenthal, L., Lobel, M., 2016. Stereotypes of Black American women related to sexuality and motherhood. Psychol. Women q. 40 (3), 414–427.
Siegler, A.J., Mouhanna, F., Giler, R.M., et al., 2018. The prevalence of PrEP use and the PrEP-to-need ratio in the fourth quarter of 2017, United States. Ann. Epidemiol.
Smith, S.G., Zhang, X., Basile, K.C., et al. The national intimate partner and sexual violence survey: 2015 data brief–updated release, 2018.
Stockman, J.K., Lucea, M.B., Draughon, J.E., et al., 2013. Intimate partner violence and HIV risk factors among African-American and African-Caribbean women in clinic-based settings. AIDS Care 25 (4), 472–480.
Stockman, J.K., Lucea, M.B., Campbell, J.C., 2013. Forced sexual initiation, sexual intimate partner violence and HIV risk in women: a global review of the literature. AIDS Behav. 17 (3), 832–847.
Substance Abuse and Mental Health Services Administration. SAMHSA's concept of trauma and guidance for a trauma-informed approach. 2014.
Taft, C.T., Bryant-Davis, T., Woodward, H.E., Tillman, S., Torres, S.E., 2009. Intimate partner violence against African American women: an examination of the socio-cultural context. Aggress. Violent Behav. 14 (1), 50–58.
Tsuyuki, K., Chan, E., Lucea, M.B., et al., 2022. Characterising a syndemic among black women at risk for HIV: the role of sociostructural inequity and adverse childhood experiences. Sex Transm. Infect.
U.S. Food and Drug Administration. *Truvada for PrEP fact sheet: ensuring safe and proper use,* 2012.
Willie, T.C., Stockman, J.K., Overstreet, N.M., Kershaw, T., 2017a. Examining the impact of intimate partner violence type and timing on pre-exposure prophylaxis awareness, interest, and coercion. AIDS Behav.
Willie, T.C., Stockman, J.K., Perler, R., Kershaw, T.S., 2018. Associations between intimate partner violence, violence-related policies, and HIV diagnosis rate among women in the United States. Ann. Epidemiol.
Willie, T.C., Keene, D.E., Kershaw, T.S., Stockman, J.K., 2020. "You never know what could happen": women's perspectives of pre-exposure prophylaxis in the context of recent intimate partner violence. Womens Health Issues 30 (1), 41–48.
Willie, T.C., Monger, M., Nunn, A., et al., 2021a. "PrEP's just to secure you like insurance": a qualitative study on HIV pre-exposure prophylaxis (PrEP) adherence and retention among black cisgender women in Mississippi. BMC Infect. Dis. 21 (1), 1–12.
Willie, T.C., Alexander, K.A., Kershaw, T., Campbell, J.C., Stockman, J.K., 2021b. No longer the exception, but the standard: integrating trauma-informed policy and pre-exposure prophylaxis implementation for women. Womens Health Issues.
Willie, T., Kershaw, T., Campbell, J.C., Alexander, K.A., 2017b. Intimate partner violence and PrEP acceptability among low-income, young black women: exploring the mediating role of reproductive coercion. AIDS Behav. 1–9.
Wyatt, G.E., Gómez, C.A., Hamilton, A.B., Valencia-Garcia, D., Gant, L.M., Graham, C.E., 2013. The intersection of gender and ethnicity in HIV risk, interventions, and prevention: New frontiers for psychology. Am. Psychol. 68 (4), 247.