HIV Among Black Men That Have Sex with Men in New York City

Christian M. Senecal

Department of Community Health, Tufts University

CH 0030; Community Health Methods

Dr. Andrea Acevedo & Dr. Shalini Tendulkar

December 15, 2020

Abstract

Human Immunodeficiency Virus (HIV), when left untreated, causes suppression of the host's immune system, causing various negative health outcomes. The prevalence of HIV in Black men that have sex with men (MSM) continues to rise significantly, while the incidence and prevalence of HIV in White MSM decrease. Black MSM, especially in New York City (NYC), face historical trauma, inadequate cultural considerations, stigma based on HIV status and sexual orientation, and have a low perceived risk of HIV. These barriers exacerbate risky sexual behaviors that increase the transmission chance of HIV and prevent some Black MSM from accessing testing and treatment for HIV. To reduce risky sexual behaviors, a four-component group-based intervention was adapted to promote consistent condom use and HIV testing among Black MSM in NYC. A Black MSM from the local community will lead the group sessions, and the components will be adjusted to include more information about HIV risk and Black cultural values surrounding HIV status and sexual orientation. In order to prevent outsiders from knowing about participants' participation in the trial, as identification HIV status and not being heterosexual can result in violence towards the participants, office spaces will be rented for the group sessions. This intervention's success will be measured by participants' responses to a series of virtual surveys, specifically looking at outcomes related to the consistency of condom use and HIV testing. Participants may take the surveys on their own devices or use a device in the office space to ensure accessibility and privacy.

Background on HIV

Epidemiology of HIV

Human Immunodeficiency Virus (HIV) disproportionately affects Black men that have sex with men (MSM). While the incidence of HIV from 2008 to 2015 in the United States has decreased by 14.8%, this was mainly correlated with substantial drops in HIV incidence among women, intravenous drug users, and heterosexual people (Hall et al., 2017; Singh et al., 2018). MSM of various racial demographics have experienced a considerably lower decline. From 2008 to 2013, Black MSM experienced a 4.1% decrease in new cases of HIV, White MSM experienced a 3.1% decrease, and Latinx MSM experienced a 1.2% decrease (Eaton et al., 2018). While Black MSM experienced the highest decrease in incidence when compared to White and Latinx MSM, Black MSM continuously account for 44% of people living with HIV in the United States (Hall et al., 2017; Murray et al., 2018). Black MSM are more likely to participate in risky sexual behaviors, specifically having condom-less anal sex with numerous strangers of unknown HIV status, that facilitate the spread of HIV (Singh et al., 2018). Black MSM often cite stigma and social influencers of health as reasons for these risky behaviors (Hightow-Weidman et al., 2017; Matthews et al., 2019; McCree et al., 2019; Nelson et al., 2016; Watkins et al., 2016; Wheeler et al., 2019).

Bio-physiological Description of HIV

HIV can affect anyone, regardless of identity. HIV is spread when infected bodily fluids come in direct contact with a healthy person's mucous membranes or bloodstream, mainly during sexual intercourse or in any activity that involves the exchange of infected blood (HIV.gov, 2020). HIV suppresses a person's immune system by hijacking and destroying CD4 T-cells (CD4 cells), which play an active role in defending a person from infection. HIV is able

to attach to the surface of the CD4 cells, inject its genetic material into the cell to take advantage of the cell's natural capability to duplicate genetic information, and then kill the CD4 cell once its genetic information is duplicated, which then raptures to release more HIV copies into the body. This occurs during a latency period, in which duplication occurs at very low levels and therefore does not produce any symptoms, and an active period, which occurs about 8-15 years after the latency period and happens at a much higher rate.

In a healthy person, CD4 counts can range average about 1200 cells per cubic millimeter of blood, but as HIV continues to replicate and destroy CD4 cells, this count decreases to dangerous levels. As soon as CD4 levels fall below 200 cells per cubic millimeter of blood, the person is said to have Acquired Immune Deficiency Syndrome (AIDS) and are at risk for contracting various opportunistic infections. Opportunistic infections (OIs) are pathogens other than HIV. A healthy immune system could typically fight off OIs, but they are typically deadly in a person living with AIDS. The body no longer has enough CD4 cells to effectively control and eliminate infection, thus allowing OIs to replicate in a person living with AIDS rapidly. Numerous OIs can attack simultaneously, putting immense strain on the body and causes death (HIV.gov, 2020).

Barriers for Black MSM in General

Treatment and Prevention for HIV in Black MSM

There are no current vaccines or cures for HIV. The current treatment for HIV is a life-long regimen of antiretroviral therapy (ART), which can boost the immune system and suppress HIV to the point that it is undetectable and not transmissible. While ART returns the quality of life for someone living with HIV to a healthy individual, treatment is expensive and requires constant contact with the health care system. Pre-exposure prophylaxis (PrEP) is a once-daily

oral medication that protects CD4 cells from infection, which significantly lowers one's chance of contracting HIV from an HIV-infected individual. PrEP must be taken every day to be effective, and similar to ART, it is also costly and requires constant contact with the health care system (CDC, 2020). Black MSM are particularly vulnerable to HIV because they have the lowest engagement with medical care when compared to Latinx and White MSM (Eaton et al., 2018). Not being engaged with medical care can cause lapses in ART and PrEP, lack of STI and HIV screening, and delays in assessing any toxicity of current treatments (Hightow-Weidman et al., 2017).

Among surveyed Black MSM, only 70% have health insurance, and only 59% thought they had enough money to afford PrEP through community clinics; furthermore, Black MSM were more likely to be unemployed, experience substantial financial hardships, and live below the poverty line resulting in lapses in care (Nelson et al., 2016; Singh et al., 2018; Wheeler et al., 2019). In HIV-positive Black MSM, despite all having reported ART uptake, only 65% had undetectable HIV, meaning that there were significant lapses in ART (Hightow-Weidman et al., 2017). Furthermore, of 226 participants in a PrEP uptake trial, only 64% of participants remained taking the medication as instructed for 26 weeks (Wheeler et al., 2019). While ART and PrEP remain the gold standards in treating and preventing HIV, novel policies and programs are needed to increase Black MSM adherence.

Stigma Surrounding HIV for Black MSM

Various forms of stigma, which appear to be amplified within the Black community, are commonly cited as reasons for participating in risky sexual behaviors and not coming in contact with the health care system (Eaton et al., 2018; McCree et al., 2019; Murray et al., 2018). Among 66 Black MSM that were not adequately engaged in health care, all of them referenced

anticipated stigma, specifically related to having an official HIV diagnosis and having to confront their sexual identity, as the main reason for not coming in contact with the health care system to get tested and receive treatment (Eaton et al., 2018). Anticipated stigma results from the belief that if one is officially labeled as having a specific identity, then they will be subjected to the various stigmas associated with that identity, and therefore delay getting tested to get diagnosed. This can be understood by assessing the Black community's perception of HIV and MSM. As a 31-year-old, Black, gay-identified male explains:

> My thought is that Black men seem to hide-I mean it's kind of different for being a white male-white, men are more out there about their gay status or whatever. But then the Black men, they tend to hide you know-most of them you know the "DL" brothers you know what I'm saying because society doesn't accept two males being together, so it puts them at higher risks. And Black men are supposed to be strong, supposed to be the ruler of the house you know what I'm saying, and nobody-I don't think some Black men like to be called faggot or gay. It makes you feel belittle or whatever you know what I'm saying. So I think with society not accepting gay life or whatever, that put more Black men at risk of getting HIV because they gotta go to the park, they gotta go to places where people can't see them and go in the dark or whatever to do that's where you are more at risk too, we hide. (Murray et al., 2018)

Homophobia within the Black community and the fear of being detached from friends and family owing to being labeled as queer was commonly cited for leading to a lack of self-esteem and fear of coming in contact with the health care system (Hightow-Weidman et al., 2017; Matthews et al., 2019; Murray et al., 2018).

Black MSM are especially vulnerable to HIV infection owing to increased risky behaviors associated with stigma related to HIV status and sexual orientation. 66% of participants understood the increased risk of HIV from participating in risky behaviors but cited stigma as being the number one reason for continuing these risky practices (Murray et al., 2018; Watkins et al., 2016). The primary method for understanding stigma unique to Black MSM is through surveys and interviews of Black MSM with HIV. However, using surveys and interviews are limitations when discussing stigmatized conditions, as participants will likely respond in a way that seems more desirable or fail to participate at all because they do not want to be identified as an MSM or a possible HIV-carrier. Survey and interview results will only be generalizable to those that have similar identities and experiences as the respondents, as well as the sampling methods having high levels of underreporting because of researching stigmatized conditions (Eaton et al., 2018).

Barriers for Black MSM in NYC

Black MSM in New York City

Stigma, in addition to other influencers of health for Black MSM, are especially prevalent in New York City (NYC). NYC has significant infrastructure to combat HIV, including numerous community clinics, policymakers understanding the need for HIV reduction among marginalized communities, and various campaigns targeting the reduction of HIV within local communities (Drumhiller et al., 2018). However, despite all of these factors, Black MSM still carry 54% of the overall HIV burden in NYC and this disparity continues to increase each year (Drumhiller et al., 2018). Over 1.5M Black men reside within NYC, therefore constituting over 10% of the overall population of the city (Hailey et al., 2020). More than 53.2% of all Black MSM in NYC have reported experiencing some form of gay-related discrimination, which is

linked to elevated levels of stress, being denied or given lower-quality health care, and even being physically attacked (Reilly et al., 2016). Furthermore, Black MSM in NYC had a broad range of 1-23 sexual partners annually, typically without knowing the partner's HIV status (Dacus & Sandfort, 2020). With such a large population of Black men in NYC and a high prevalence of risky behaviors, it is vital to understand how the perceived risk of HIV, inadequate cultural considerations, and historical trauma may increase risky behaviors among these Black MSM.

Perceived Risk of Contracting HIV Among Black MSM in New York City

Perceived risk is the extent to which an individual, when completing an activity, feels at risk of developing poor outcomes from that activity. For Black MSM, the perceived risk of contracting HIV influences how often they practice safe behaviors. HIV negative MSM were interviewed to learn about how they perceive the risk of contracting HIV with their current sexual behaviors and practices. No surveyed Black MSM identified that they were not at risk for HIV. Their responses, furthermore, give insight into why they practice safe-sex techniques with unknown partners and how they assess choosing partners based on the risk of contracting HIV (Dacus & Sandfort, 2020; Drumhiller et al., 2018; Reilly et al., 2016).

Interviewed men knew that the intersectionality of their identities of being Black and queer resulted in a higher risk of contracting HIV, which is correct as Black people and queer people disproportionately bear the burden of HIV diagnoses within NYC and the United States (Reilly et al., 2016). In high-risk populations, knowing a partner's HIV status before having sexual interactions can prevent the spread of HIV, as people are more likely to use protective measures or abstain from having sexual intercourse to begin with. Despite persisting feelings of being uncomfortable, Black MSM were more likely than non-Black MSM to have "The Talk," a

term coined by the interviewees, about HIV status with their partner before sexual activity begins. Talking before sexual relations was cited as the best method to lower the perceived risk of contracting HIV (Dacus & Sandfort, 2020). If "The Talk" never occurred or they perceived their partner as not credible, Black MSM were likely to wear a condom during anal penetration, have condomless anal sex without ejaculation within the anus of the partner, or ensure that they were the insertive partner ("top").

Black MSM perceived being the insertive partner as significantly less risky in terms of contracting HIV if the receptive partner ("bottom") is positive, stating that their position as the insertive partner prevents them from acquiring HIV. Alvin, a Black MSM without HIV, explained that "If I top most of the time, then I'm at less risk for HIV. That's why I don't bottom" (Dacus & Sandfort, 2020, 3049). Receptive partners also seek out individuals who state that they are never the receptive partner for a similar rationale. Theo, a Black MSM without HIV, explains that "If I meet total tops, if they're not already infected, they're going to stay that way" and then goes onto explain that he would "deliberately only bottom for men he believed were total tops" (Dacus & Sandfort, 2020, 3049). If the receptive partner did not believe that their partner was a "total top" they were significantly more likely to refuse sexual activity if the insertive partner did not wear a condom. In contrast, the receptive partner was more willing to let someone they deemed a "total top" not wear a condom and ejaculate internally without protection. Some studies have demonstrated that those in the insertive position are less likely to contract HIV than those in the receptive position, mainly because the anal walls are prone to rupture, which allows for blood and sexual fluids to mix, but both partners — regardless of sexual position — are at risk for contracting HIV. Therefore, the overall knowledge of how HIV

is contracted and the perceived risk of participating in certain sexual behaviors influence Black MSM in NYC's decisions surrounding sexual positions and safe sex behaviors.

Lack of Cultural Considerations and Historical Trauma as Social Influencers of Health for Black MSM in New York City

While numerous campaigns exist to reduce HIV status within New York City, many fail in achieving positive health outcomes among Black MSM (Drumhiller et al., 2018). Whether the goals for these campaigns are to increase HIV testing, encourage safe sex behaviors, or provide general education, they remain ineffective. While these campaigns were up, Black MSM continued to make up over 20% of new HIV infections each year in NYC (Mgbako et al., 2020). Insufficient cultural considerations were cited in the use of stereotypes, over-reliance on effeminate men, poor representation of community members, and lack of interventions focusing on HIV risk perception (Drumhiller et al., 2018; Mgbako et al., 2020). While campaigns remain effective in reducing HIV among White MSM, the same imaging and messaging remain ineffective for Black MSM (Mgbako et al., 2020).

Black MSM cited that because of heightened stigma surrounding the discussion of HIV status and being queer in the Black community, overly effeminate and stereotypical models lead to internalized homophobia and feelings of separation from the messaging (Drumhiller et al., 2018; Reilly et al., 2016). Historically, White MSM are much more accepted within society than Black MSM. The inclusion of these stereotypes and primarily White MSM continue to increase the normalization of White MSM within society at the expense of their Black counterparts (Hailey et al., 2020). Black MSM explained a desire to see programming including men that are not easily identifiable as gay, "because so many people in the-, uh, communities of color don't associate themselves with being a lesbian or gay," as a gay-identified POC explained

(Drumhiller et al., 2018, 292). Black MSM that express themselves more effeminately are more likely than the straight-passing individuals in the MSM community to be victims of violence and discrimination (Reilly et al., 2016). Therefore, increased efforts need to focus on reducing homophobia in non-White communities and improving representation to reduce discrimination, hate crimes, and improve healthy behaviors (Dacus & Sandfort, 2020; Hailey et al., 2020; Reilly et al., 2016).

These identity-based barriers manifest themselves in various healthcare interactions. Black MSM report inadequate cultural competencies by medical staff in the delivery of an HIV diagnosis. Despite a diagnosis being reportedly debilitating initially, providers typically deliver the diagnosis abruptly and fail to provide long-term social support (Hailey et al., 2020; Mgbako et al., 2020). The swift delivery of a diagnosis blindsides patients as they contemplate the stigma associated with being HIV-positive, resulting in social isolation and the failure to recall any subsequent treatment information from the medical staff (Hailey et al., 2020; Mgbako et al., 2020). Long-term social support, typically in the form of other Black MSM that are HIV positive, are linked with reducing stigma, acceptance of HIV as a condition, and better adherence to ART. However, this failure to provide resources or attempting to deliver resources directly after a diagnosis can result in long-term trauma and the development of severe mental health conditions, such as depression and anxiety (Hailey et al., 2020; Mgbako et al., 2020; Reilly et al., 2016). Focusing on improving cultural considerations and acknowledging existing historical trauma within the Black MSM community enables stakeholders to frame interventions around behavior change techniques to increase positive behaviors and decrease HIV prevalence.

Evidence-Based Practices for HIV Reduction in non-Black MSM

Improving PrEP Adherence and Retention in Chicago Youth through Mobile Health

In addition to preventative behaviors and ART, PrEP reduces the risk of contracting HIV by 99% when taken once daily, and this effectiveness decreases significantly when the strict once-daily regimen is interrupted (CDC, 2020). To increase adherence to taking PrEP as prescribed, Dr. Albert T. Liu and team created PrEPmate, a mobile health-based intervention (Liu et al., 2019). PrEPmate is a four-component system that uses text messaging and interactive online programming tailored for youth in Chicago to improve adherence and retention to PrEP programming and assistance. These components consisted of daily text message reminders to take medication, answering participants' questions virtually, and providing requested medical resources when available. Participants were mainly recruited from one community STI testing and prevention center in downtown Chicago and consisted of predominately White and Latino MSM between the ages of 18 and 29. PrEP retention and adherence were evaluated through if MSM attended a PrEP study visit, where the concentration of PrEP in the blood was determined at 4, 12, 25, and 36 weeks after baseline. If the blood work showed the appropriate level of PrEP concentration, it was said that the participant was adherent; if the participant attended their appointments at each of the time frames, it was said that they were retained. For the participants receiving PrEPmate, 80% were retained at 36 weeks, and 72% had blood concentrations of PrEP consistent with taking PrEP daily. For the participants receiving just receiving the standard of care PrEP education, 57% were retained at 36 weeks, and 57% had appropriate blood concentrations (Liu et al., 2019).

While PrEP retention and adherence for the PrEPmate arm versus the control arm were significant, lack of cultural considerations and barriers for MSM to be recruited are flaws within the study. Since MSM of different races experience different intensities and forms of discrimination, oppression, and stigma, tailoring the programming to be general to all MSM in a

specific age group likely decreased effectiveness. The study also depended on participants having a smartphone and laptop to run online-based interventions, which means that low-income MSM were excluded. Many MSM live below the poverty line and are likely to experience homelessness, especially non-White MSM, meaning they likely would not have had the hardware or constant, stable internet required for the study (Nelson et al., 2016). Furthermore, the study's recruitment was primarily drawn from a single community based STI prevention center, but the only interaction that many non-White MSM have with the health care system is with emergency rooms because of uninsured status and stigma (Eaton et al., 2018).

Increasing Condom Use and HIV Testing Among Latino MSM in Charlotte, NC

Because increasing condom use and HIV testing are considered behaviors that reduce HIV incidence, Scott D. Rhodes and team created an interactive four-component group-based intervention (called *HOLA en Grupos*) that combines elements of social cognitive theory, traditional Hispanic and Latino cultural values, and empowerment (Rhodes et al., 2017). Latino MSM led the four components during a four-hour period. The components consisted of explaining the impact of HIV on Latino MSM specifically, skills-based learning activities to understand correct condom use and practice condom use negotiation, dissecting relevant Latino cultural values that lead to HIV- and queer- related stigma, and providing local HIV-related resources. The first outcome, retention, was measured by how many participants completed an in-person interview six months after the intervention. The second outcome, routine HIV testing and consistently using a condom during insertive and receptive sex, was measured by interviewing participants six months post-intervention. After recruiting Latino MSM through advertising in places such as cultural centers and gay clubs, they were randomly assigned to the group intervention arm or the control arm, in which interventionalists focused on general health

topics that impact Latinx people. 100% of participants were retained at the 6-month post-intervention interview for both arms. Those that received the group-based intervention were 3.94 times as likely than the control arm to report consistent condom use and HIV testing, in addition to increased general knowledge surrounding HIV risk and reduced homophobia (Rhodes et al., 2017).

Overall, this study was largely effective with numerous positive aspects. The study's design had numerous cultural considerations that likely increased retention and effectiveness, specifically when discussing how to overcome the stigma around Latinx cultural beliefs surrounding homosexuality. One flaw of the study was having an interview to discuss HIV testing rates and condom use, as participants, when not anonymized, are more likely to respond with answers that are seen as desirable to the interviewer. Therefore, interviewing could have inflated the rate of HIV testing adherence and condom use because of social desirability bias.

Increasing Condom Use and HIV Testing Among Black MSM in NYC

Selecting the Group-Based Intervention for Black MSM in NYC

Adapting the interactive, four-component group intervention would be the best fit for promoting healthy behaviors in Black MSM in New York City. As Black MSM in NYC disproportionately share the burden of HIV, increasing condom use and HIV testing using a culturally appropriate manner would be practical steps to reduce the prevalence and incidence of HIV. The *HOLA en Grupos* model is an excellent conceptual fit because of these reasons. Furthermore, the group-based intervention would be a good practical fit because Charlotte, NC and New York City are both urban locations, and Latino and Black MSM face similar cultural barriers related to seeking care, such as heightened stigma around sexual orientation (Watkins et al., 2016). While MSM in rural locations face elevated levels of homophobia and worse access to

health care, health outcomes vary from MSM in urban locations, and there is a significant lack of research available to make appropriate comparisons. New York City has more resources and a much larger population than Charlotte, but Charlotte and New York City are both large urban centers on the east coast with multiple health care facilities, which makes them comparable (Mgbako et al., 2020; Rhodes et al., 2017). Both cities, therefore, have a similar set of local circumstances. Latino and Black MSM in both cities face elevated levels of stigma and discrimination from non-POC and people who share their racial identities. Both Black and Latinx cultures have strong anti-queer sentiments, which results in inflated levels of anonymous sexual interactions, lower rates of condom use, and lower levels of HIV testing rates (Rhodes et al., 2017). The *HOLA en Grupos* intervention provides an effective, culture-based strategy to increase healthy behaviors. This intervention could ultimately be adapted for Black MSM in NYC because of the shared set of local and cultural circumstances between Latino MSM in Charlotte and Black MSM in NYC.

The intervention was based on cultural considerations and skill-building, leading to its high evidence-based effectiveness for the Latino MSM sample. With over 304 participants, 100% completed all four components and the final interview (Rhodes et al., 2017). This is significant because the lack of retention to care for Black and Latino MSM has been continuously cited as an issue for treating and preventing HIV among these populations. The intervention was also significantly effective at promoting consistent condom use and HIV testing six months after the intervention compared to the control group. 82.3% of the intervention participants reported HIV testing after each sexual partner in the six months following the intervention, compared to 28.0% in the control arm. Furthermore, 64.2% of the intervention participants reported consistent condom use, regardless of position, in the six months following

the intervention, compared to 36.1% in the control arm (Rhodes et al., 2017). In Black MSM, lack of condom usage and low rates of seeking HIV testing and care are contributing factors to the high prevalence of HIV, and therefore the data provides an effective means to combat these risky behaviors. However, testing the intervention's impact in a time period longer than six months is needed to ensure sustainability.

Adapting the Group-Based Intervention for Black MSM in NYC

In order to implement the *HOLA en Grupos* intervention for Black MSM in NYC, adjustments to each of the four components would be necessary. The underlying social cognitive theory and target outcomes of increasing consistent HIV testing and condom use will not be adjusted. Since each of the components was initially delivered by a Latino MSM, effeminate Black MSM from NYC would be recruited to facilitate and adapt the group-based intervention. Having members from the local community that reflect the community the intervention is being delivered to is essential to ensure cultural appropriateness and overall effectiveness (Drumhiller et al., 2018; Mgbako et al., 2020). The small group sessions will also be utilized because it was cited to increase group participation and knowledge retention (Rhodes et al., 2017).

The recruitment stage would be changed to exclude any mention of queerness (e.g., gay, bisexual), instead stating "seeking men that have had sex with men," to reduce feelings of internalized homophobia and account for members of the Black MSM community not identifying with the queer community. The first component would be altered to include the impact of HIV on the Black community in NYC to increase the perceived risk of the condition. The information around how HIV is transmitted would be adjusted to emphasize that HIV can be transmitted via the insertive or receptive partner to reduce the perception that the insertive partner is immune to HIV. General information regarding HIV and STIs, healthy behavior

promotion, and access to local HIV testing facilities would still be included in their original form because these aspects are not unique to any one geographic region. The second component would be implemented in its entirety with a slight alteration. Interactive activities to practice condom wearing negotiations, essentially "The Talk," and correctly wearing a condom would remain unchanged. The section about how to protect their partners from HIV would be adjusted by discussing how "total tops" should always wear a condom to emphasize that HIV can be transmitted to an insertive partner and protect the receptive partner. The third component would be changed to discuss how internalized homophobia and Black cultural stigma surrounding HIV and homosexuality affect sexual health, rather than discussing Latino cultural values. The information provided about locally available resources and how to overcome potential barriers associated with them would be included unchanged. The fourth component, a small group-based discussion based on a testimonial by an MSM living with HIV, would remain mostly unchanged because learning about living with HIV ultimately reduces stigma. The testimonial would be from a local community member rather than a model to reduce feelings of message separation.

Implementing the Group-Based Intervention for Black MSM in NYC

The adapted intervention's objectives would be to increase consistent condom use and HIV testing among Black MSM in NYC, with a secondary objective to increase the perceived risk of HIV. The ultimate goal of these objectives is to lower HIV incidence, progression to AIDS, and increase prevention-based behaviors. Recruitment would be held virtually on gay dating platforms, general websites, and flyers placed on NYC subways. Since the intervention is group-based, the main requirement for employing the intervention is a private space to meet. In NYC, regular office spaces would be rented out to have these group-based conversations. Rather than meeting at community clinic spaces or cultural centers, office spaces would provide privacy

and not raise suspicion for why the participants are meeting. Because sensitive and stigmatized conditions and behaviors are being discussed, it is vital to maintain discretion and ensure participants' comfort. Randomly selected Black MSM in small groups ($n<5$) would complete the four training components. The training blocks would be held over numerous times and days in the office spaces to accommodate different schedules. To ensure sustainability, a phone line and a website would be established to connect participants to resources and answer any questions that may arise at any time in the future.

Evaluating the Group-Based Intervention for Black MSM in NYC

Outcomes will be measured via a series of virtual surveys asking about HIV testing frequency and condom use frequency, sent out 6-, 12-, and 36-months post-intervention. Participants will also be directed to a created website and hotline number to ask questions about resources or pose concerns about the components. The survey will also ask questions specific to the participant's overall perceived risk of HIV and the magnitude of stigma surrounding HIV and queerness. Participants can either fill out a virtual, anonymous survey using their own or a public computer or return to the office space to take the survey on a provided computer. This is a strength, as it will help ensure Black MSM, regardless of income level and housing status, can complete the survey in a private, safe location. Keeping the survey anonymous would help eliminate social desirability bias. Reaching out directly to participants after the intervention could pose ethical complications, as people finding out about their participation could lead to violence, and therefore participants will be urged to create date ranges to take the survey at the post-intervention dates when they are first at the office. While this will likely create a risk of losing participants to follow-up, reducing threats of violence or homelessness is a more important ethical consideration. To combat losing participants to follow-up, each survey will be

incentivized with cash. Success will be measured by how many people complete each of the post-intervention surveys and what their surveys indicate as to if their condom usage and HIV testing frequency increased to appropriate levels post-intervention.

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