12-26-2017

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Recommended Citation
Hotton AL, Keene L, Corbin DE, Schneider J, Voisin DR. The relationship between Black and gay community involvement and HIV-related risk behaviors among Black men who have sex with men. J Gay Lesbian Soc Serv. 2018;30(1):64-81. doi: 10.1080/10538720.2017.1408518. Epub 2017 Dec 26. PMID: 30872907; PMCID: PMC6413304.

HHS Public Access

Author manuscript

J Gay Lesbian Soc Serv. Author manuscript; available in PMC 2019 March 12.

Published in final edited form as:

J Gay Lesbian Soc Serv. 2018 ; 30(1): 64–81. doi:10.1080/10538720.2017.1408518.

The relationship between Black and gay community involvement and HIV-related risk behaviors among Black men who have sex with men

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Abstract

Blackgay men must navigate identities and stigmas related to being gay and Black, and report higher HIV incidence relative to their white male counterparts although they report lower rates of drug use and risky sexual behaviors. This study examined whether closeness to the gay or Black community correlated with HIV related risk and protective behaviors. Data were drawn from uConnect, a population-based cohort study of YBMSM on Chicago's South Side. The sample consists of 618 Black MSM ranging in age from 16–29. Cross sectional measures for this study include Black and gay community closeness, drug use, sexual risk behaviors, HIV testing and health promotion behaviors. Closeness with the gay community was associated with greater PrEP knowledge as well as participating in health promotion programs along with higher rates of transactional sex and having sex under the influence of substances, and increased odds of self-reported HIV seropositivity. Involvement in the Black community was associated with lower odds of reporting being HIV positive. Findings suggest that programs and initiatives are needed to help promote the positive aspects of the Black and gay communities, while minimizing the negative correlates of such involvements.

Keywords

HIV; Young Black MSM; Community; Health Outcomes; Involvement

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Note: Voisin was the senior author on this paper

Introduction

In the United States, (U.S.)Black men who have sex with men (BMSM) continue to be disproportionately affected by human immunodeficiency virus (HIV) with incidence rates being highest among those who are younger (CDC,2017). Between 2010 and 2014, HIV diagnoses increased by 22% among BMSM and 87% among young BMSM aged 13–24 (CDC 2016; Wong, Schrager, Holloway, Meyer, & Kipke, 2014). Paradoxically, disparities in HIV incidences persist despite the fact that BMSM are more likely to reportpreventative behaviors relative to other MSM populations (e.g., less condomless anal sex [CAS])with main or casual partners, and drug use during sex)(Millett et al. 2012, Wong et al. 2014).Pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP) awareness, uptake and use are important approaches to curtailing and reducing such disparities among this population (Grant, Lama, & Javier et al. 2010; Grossman, Purcell, Rotheram-Borus, & Veniegas, 2013; Smith et al., 2005).

Given that individual level factors are not enough to explain thehigher prevalence of HIV among BMSM(Peterson & Jones, 2009), factors such as social contexts and networks are gaining attention asadditionaldrivers of HIV infections(Khanna, et al. 2016; Maulsby et al. 2014;Rosenberg, Millett, Sullivan, Rio, & Curran, 2014; Schneider et al. 2012). Therefore,a clearer understanding of how contextual factors such as community connections may correlate with HIV risk behaviors, might inform the development of more effective preventive strategies.

Closeness and connectiontoBlack and gay communities are significant network dimensions for BMSM who oftennegotiate multiple minority identities related tosexual orientation and race/ethnicity. The minority stress model in part, asserts that persons who belong to stigmatized or marginalized groups attributed to dimensions such as race/ethnicity and/or sexual orientation may experience prolonged stress due to prejudice, discrimination and social alienation (Meyer,2003).Some YBMSM may perceive themselves as being lodged between gay and Black communities,enduring stigma,prejudice and discrimination in both(Bowleg, 2013; Hunter, 2010a). Over time, cumulative stress associated with such marginalized identities and statuses might induce greater behavioral health risk factors (e.g., substance use, condomless anal sex, and poorer mental health)(Diaz, Ayala, &Bein2004;Quinn&Chaudoir, 2009).In contrast, it is also possible that involvement in Blackand/or gay civic community groups or organizations could decrease feelings of alienation and provide opportunities for individuals to expand their social networks and gain access to social support. Extant studies highlight how involvement canreduce feelings of alienation and facilitategreater participation within these communities, resultingin improved health related behaviors (Ramirez-Valles 2002).

Anadditional guiding theoretical framework is Hirschi's (1969) social bond theory, later social control perspective(Hirschi, 1986). As it pertains to this study, this theory posits that HIV related risk behaviors such as anal sex without condoms, or substance use are influenced by developing bonds to peergroups, organizations, and social networksthat socialize members to conform to positive or negative community norms (Hirschi, 1969). The social norms of the communities in which YBMSM are embedded may influence their

sexual health risk behaviors (Baral et al. 2013; Neblett, Davey-Rothwell, Chander, &Latkin, 2011). It is plausible that investment in these affiliations might influence individuals' behavioral health given that persons often align themselves with the norms of the communities with which they identify (Hirschi 1969). For example,individuals may be influenced by group norms related to HIV testing, PrEP uptake, condomless anal sex, and substance use during sexual activity. However, few studies have explicitly applied an understanding of YBMSM's community involvement to examine individual behavioral health.

The South Side of Chicago (SSC) and selected adjacent suburbs represent the most populous contiguous Black community in the United States(Khanna et al., 2016; Livak et al., 2013). Rates of new HIV diagnoses in Chicago among YBMSM increased from 13.2% in 2006 to 18.5% in 2009 (Livak et al., 2013). Recent studies assess the size of Chicago's YBMSM population (Livak et al., 2013), as well as this population's access to services and modes of HIV prevention and intervention (e.g., PrEP) (Schneider et al., 2012), yet, none consider how closeness to the Blackor gay community may correlate with HIV-related behaviors or diagnosis among a large sample of YBMSM.

Prior studieshave sought to explore how a sense of community and belonging may shapeBlack gay men's engagement with Blackand/or gay communities (Battle & Harris, 2013;George et al. 2012; Kubicek, McNeeley, Holloway, Weiss,& Kipke, 2013). For instance, findings from qualitative studies of Black gay men living in urban settingsilluminate how community involvement in black communities, on the one hand, and in gay communities (including black-gay communities), on the other, for many, canbechallenged by feelings of isolationdue tothe effects of homophobia and racism (George et al. 2012). While these findings are very informative, they do not elucidate how various types of community involvent may correlate with HIV-related risk and protective behaviors among a population-based sample of YBMSM.

Data from this study aredrawn from uConnect, a population-based cohort study of YBMSM on Chicago's South Side. The City of Chicago, in general,serves as a uniquecontext for exploring questions of howintersections of race/ethnicity and sexual orientation potentiallyinform individuals' community affiliations, and the potential implications for HIV-related risk behaviors. The city remains one of the most racially segregated in the United States, and many of its most visible gay anchor institutions (e.g., gay bars/clubs, LGBTQ community-based organizations)remain concentrated on the city's North Side, although this is gradually changing as more culturally specific services have expanded to the South Side (Bader &Krysan, 2015; Daniel-McCarter, 2012; Ghaziani, 2014).

Defining community and measuring closeness

What community means and how it is understoodis highly complex. Community connectedness can be viewed as individuals' needs to belong to a larger collective, establish a mutually influential relationship with that group, satisfy their individual needs and be rewarded through their collective affiliation, and construct a shared emotional connection (Frost & Meyer, 2011; McMillan, 1996; Whitlock, 2007). Researchers have distinguished community connectednessfromcommunity participation *(*Ashmore, Deaux, & McLaughlin-

Volpe, 2004). Community participation refers to behavioral participation in a community, such as through recreational activities or professional groups. Community connectedness can be conceptualized as a more cognitive/affective construct and may not involve active participation. The differences between community connectedness and participation present distinct methodological issues for assessment, since participation can be operationalized as concrete behaviors (e.g., the number of organizations to which an individual belongs)(Frost & Meyer, 2011). However, community closeness or connectedness reflects cognitive and affective components of community affiliation, such as ideological solidarity, and often are more difficult to measure(Frost & Meyer, 2012).

Community and Behavioral Health

Black men, like other racial minorities, areoften assessed ona single dimension such as race.Theirspecificracialand gender identitiesasBlackmenin the U.S. also shapethe way they experience the world and how they are perceived by others.Race and gender are often foregrounded for Black men before sexual orientation, values, education, or socioeconomic status (Bailey, 2013; Hunter, 2010; Konrad, 2013; McCune, 2008). Consequently, community attachmentsand involvements thatrespondto the heterogeneity ofBlack men's identities, statuses, and experiences may providebuffers against stigma, discrimination, and marginalization (Mattis et al. 2004).Community involvement, closeness, and attachments provide tangible benefits as well (e.g., social support, instrumental and material support) (Battle & Harris, 2013;Hill& McNeely, 2013; Mattis et al. 2000, 2004).

In general, findings from studies on the association between gay community affiliation (mostly among white samples) and HIV risk behaviors have been mixed. However, BMSM relationships to and affiliations with gay communities are frequently complex(George et al., 2012; Hunter, 2010a;Konrad, 2013). For gay men in general(including BMSM), gay community affiliation can offer important opportunities for exposure to HIV prevention messages and engagement in health protective behaviors (Crepazet al. 2006;Hightow-Weidman & Muessig, 2014;Muessig et al., 2013).However, other studies suggest gay community affiliation (e.g., bars, clubs, and bathhouses) may facilitate, normalize, and validate certain risk behaviors, such as substance use andcondomless anal intercourse(Carey et al., 2009;Halkitis, Parsons, & Wilton, 2003; Plankey et al., 2007).Consequently, gay community involvement may correlate with a combination of both positive and negative health-related behaviors.

Many BMSM are actively involved inthe Black community in various capacities.Attachment toand involvement in one's ethno-racial communityoffersinstrumental and social support, as well as opportunities for networking, and civic, community or political involvement,which mayinvolve working towards achieving racial equity and justice(Anderson, 2000; Pattillo, 2013; Hope, Keels, & Durkee 2016). Sociopolitical engagement in Black communitiesmayoccurthroughactivism,volunteerism, or affiliation with community and civic groups such asBlackGreek organizations, social clubs, religious organizations, orpolitical action groups (e.g.,Black Lives Matter)(Hope, Keels,& Durkee, 2016; Skocpol &Oser, 2004; Taylor et al. 2001).

Involvement within Black communitiesmayhavepossible health benefits for Black men. In one study, Grayman-Simpson(2012)identified personal and collective social benefits (e.g., psychological, emotional, spiritual, and collective social wellness)from black community involvement.Grayman-Simpson (2012)suggests the 'helping tradition' prevalent among African Americansbenefits both individuals and the larger communityby fulfilling "…basic group and individual social, psychological, emotional, and spiritual needs" (p. 38).In a study of Black men,community involvement assessed as church participation, was associated with better mental health,lower smoking, and lower daily drinkingamong participants (Brown & Gary 1994). Other studies measuring community involvement as church participation have produced similar findingsand documented health benefits (Ellison et al. 2001; Taylor, Chatters,&Levin 2004).However, these findings must be interpreted with caution when it comes to BMSM given the frequentlycomplex, and occasionally ambivalent relationships persons may have with religious institutions in particular, given the homophobic messagesdelivered in some Black churches (Harris, 2010; Miller, 2007;Pitt, 2010). Evidence suggestsinvolvement in specific Black gay communitiesmay also increase the positive healthbehaviors of YBMSM. House and ball communities, for example, which are present in urban cities across the U.S.,are social networks of mostlyBlack LGBTQ youth and young adults (Bailey, 2009; Phillips, Peterson, Binson, Hidalgo, & Magnus, 2011). These kinship communitiesprovide resources to participantssuch as housing,community, and social support, as well as conveying information related toHIV and STI prevention(Arnold & Bailey, 2009; Bailey, 2009, 2011, 2013). In recent years,house and ball communities have become important venues for innovativeculturally-tailored HIV interventions, includingdispensing information related to prevention methods like pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP)(Brooks, Landovitz, Regan, Lee, & Jr, 2015; Dickson-Gomez et al., 2014). For example,a recent Chicago-based study found that house and ball community membership was associated with greater PrEP awareness(Khanna, Schumm, & Schneider, 2016).

The Current Study

This study addresses several gaps in theextant literature. In recent years, there has been a call for increased focus on resilience-based approaches to HIV prevention for BMSM. The black community has been a significant source of support and resiliency for Black men in the U.S(Della, Wilson, & Miller, 2002;George et al., 2012; Payne, 2011).Similarly, gay community attachment(including black-gay community affiliation)has been found to serve a supportive role for manyYBMSM and BMSM(George et al. 2012; Miller, Forney, Hubbard, & Camacho,2012).However, no studies have examined whether blackand gay community closeness might correlate with lower HIV health-related behaviorsor being HIV-positive for YBMSM. Given both the multiple identities and contextsBMSM negotiate (i.e., while being both Black and gay), it is important to examine how closeness to these communities might correlate with specific HIV health-related behaviors or having an HIV positive diagnosis. Findings from this study have important practice, policy and research implications for YBMSM.

Methods

Data for these analyses were drawn from UConnect, which used Respondent Driven Sampling (RDS) to investigate the impact of social networks on the drug and sexual risk behaviors of BMSM. Detailed descriptions of sampling, recruitment, and data collection methods have been previously published(Khanna et al., 2016). Briefly, RDS allows for the recruitment of a citywide population-based sample, which moves beyond the methodological limitations of the small convenience and venue specific samples of prior studies (Halkitis, Parsons, & Wilton, 2003). RDS recruitment begins with identification of initial eligible participants ("seeds") who are asked to recruit members of their peer networks; peers who enroll in the study ("sprouts") are in turn asked to recruit their peers, and so on. Recruitment proceeds in this manner until the desired sample size is reached; the goal is to obtain long recruitment chains (i.e., linkages between seeds and sprouts) comprised of multiple recruitment waves (Heckathorn, 1997). RDS was used in this study to recruit a sample of YBMSM from the South Side of Chicago and adjacent majority Black neighborhoods between June 2013 and July 2014(Heckathorn, 2002;Jenness et al. 2012; Magnani et al. 2005;McCreesh,et al. 2012;Rudolph, Gaines, Lozada, Vera, &Brouwer, 2014).RDS seeds were selected from a wide distribution of social spaces utilized by YBMSM, including but not limited to virtual spaces such as Facebook. Respondents were eligible if they: 1) self-identified as African American or Black, 2)were male sex assigned at birth, 3) were between 16 and 29 years of age (inclusive), 4) reported oral or anal sex with a male within the past 24 months, and 5) were willing and able to provide informed consent. Respondents were given up to six vouchers to recruit others, and each respondent was given $60 for participation and $20 for each successful recruit enrolled into the study. Recruitment occurred over 58 weeks and resulted in 618 eligible respondents, recruited in chains up to 13 waves in length. Of the 62 seeds, 38 (61.2%) recruited at least one sprout, and a median of 2 recruits (range 0–6).

Sample weights were generated using Gile's Sequential Sampling (SS) estimator, which treats RDS as a successive sampling process where the size of the hidden population can be reliably estimated(Gile, 2011). The population of younger Black MSM in this region was previously estimated to be 5500, and we thus used the SS estimator to generate sample weights using the RDS package in R statistical software(Handcock, Fellows, &Gile, 2014; Handcock, Gile, & Mar, 2014;Livak et al. 2013).

Measures

*S*ociodemographics included age in years, educational attainment (current student, less than high school, high school or GED equivalent, or some college/college degree), and annual household income (dichotomized as <$20,000 vs. ≥ $20,000 per year since the majority reported very low incomeand more finely classified income categories did not improve model fit).

Community Closeness

In prior findings a confirmatory factor analyses was conducted of the 8-item Connectedness to the LGBT Community Scale (Long & Perkins, 2003;Frost & Meyer, 2011)among a racially diverse sample of 396 sexually minority individuals (Frost & Meyer, 2011).

Findings indicatedthat these 8 items reflected three potential subdomains of community connectedness (i.e., closeness, bonding, and positive benefits (Frost & Meyer, 2011; Long & Perkins, 2003). This study was primarily focused on assessing Black and gay community closeness and employed the itemsfrom the confirmatory factor analyses which capturedcloseness:"How close do you feel to the gay community?" and "How close do you feel to the Black community?"measured on a four-point scale (not close at all to very close) with higher scores indicating greater community closeness. Community closeness was analyzed as a binary variable ("somewhat close" or "very close" vs. "not very close" or "not at all close").

HIV Health Related Behaviors

This study assessed specific HIV-related behaviors and having an HIV positive diagnosis. Participants reported their sexual behaviors in the past 6 months with male and transgender partners, frequency of anal sex and frequency of anal sex episodes without condoms (condomless anal sex was defined as any reported anal sex without condoms), frequency of transactional sex (defined as trading sex for drugs or money; analyzed as any vs. none); and frequency of drug use during sex (analyzed as any vs. none), sex with any partners of unknown HIV status (yes vs. no), and in the past 12 months, use of marijuana and other substances, including ecstasy, crack/cocaine, methamphetamine, heroin, prescription opiates, and other drugs. Substance use other than marijuana was not analyzed due to low prevalence of other reported substances. Participants self-reported their HIV status (positive, negative, unknown), whether they had participated in a behavioral health promotion program in the past 12 months (yes vs. no), whether they had ever heard of PrEP (yes vs. no), and if they had tested for HIV in the past year (yes vs. no).

Statistical Analysis

Characteristics of the sample were described using frequencies for categorical variables and means, standard deviations, and medians for continuous variables. Multivariable logistic regression models were fittedseparately for each behavioral risk and protective outcome using the SURVEYLOGISTIC procedure in SAS Version 9.4 and incorporated clustering on RDS seed, sampling weights, and a finite population correction using an estimated population size of YBMSM on the South Side of Chicago of 5500(Livak et al. 2013). All multivariable models controlled for age and income as confounders, and both hypothesized predictors were entered into the model simultaneously (i.e., Black and gay community closeness) Gay and Black community closeness were modestly correlated (Spearman rho=0.22, $p<0.01$), but did not indicate multicollinearity so we included both constructs in the same models to understand the independent and combined effects of different affiliations. Interactions between gay and Black community affiliation were also included in the models to determine if the effect of one affiliation modified the effect of the other on risk and protective behaviors.All analyses controlled for the potential effects of age and income based on earlier empirical findings documenting that these factors correlatedwith HIV related health factors(Quinn,Voisin, Bouris, & Schneider, 2016).

Results

Sample Characteristics

The sample consisted of 618 BlackMSM who ranged in age from 16–29; the median age was 23 (IQR, 20–25). The majority (79.5%) reported an annual household income of < $20,000; 32% were full or part-time students; 26.5% had completed high school or GED equivalent, and 35.4% had completed some college or received a college degree. Among the overall sample, 149 (24.1%) participants were HIV positive by self-report, 250 (40.5%) had ever heard of PrEP, and 133 (21.7%) had participated in a behavioral health program. Among those who self-reported their HIV status as negative or unknown, 77.6% had been tested for HIV in the past year (Table 1). Mean scores for closeness to the Black and gay communities were 3.28 and 2.76,respectively.

Community Closeness and HIV Behavioral Health

Controlling for age and income, greater levels of gay community affiliation was associated with higher odds of transactional sex (adjusted odds ratio [aOR] 3.58; 95% CI 1.55–8.26). In this model, age (p=0.010) was significant such that older youth were more engaged in transactional sex. In addition, higher levels of gay community closeness was associated with drug use during sex (aOR 1.99; 95% CI 1.10–3.57), with age (p=0.016) approaching significance; where older youth were more likely to use drugs during sex. Moreover, gay community closeness was correlated with higher PrEP knowledge (aOR1.55; 95% CI 1.05–2.30) and participation in a health promotion program (aOR1.74; 95% CI 1.08–2.80). Higher closeness with the gaycommunity was associated with increased odds of self-reported HIV seropositivity (aOR1.66; 95% CI 1.04–2.65), with older youth more likely to reporting being HIV positive (p<0.0001) (Table 2).

Higher affiliation with the Black community was associated with a decreased odds of self-reported HIV seropositivity (aOR 0.60; 95% CI 0.29–0.88), with older persons more likely to report being positive (p<0.0001) (Table 2). In main effects analyses, no other statistically significant associations were noted with regards to Black community closeness and HIV-related health behaviors. In post hoc analyses, we also explored interactions between gay and Black community closeness. We found one statistically significant interaction (p=0.048) between gay and Black community closeness and transactional sex. Closeness with the gay community was associated with higher odds of transactional sex overall, but the association was much stronger for BYMSM with lower (aOR=26.3; 95% CI 6.1–112.4) vs. higher (aOR 3.06; 95% CI 1.25–7.49) closeness with the Black community. No other interaction terms were statistically significant.

Discussion and Implications

Research has documented higher HIV incidence among BMSM compared to their other MSM counterparts(CDC, 2014; Millett, Peterson, & Flores, 2012).However, there remains an urgent need to explore factors beyond the individual level that might be associated with improving HIV health related behaviors among YBMSM. Given the marginalization that

YBMSM often experience related to race and sexuality, this study sought to examine how gay and/or Black community closeness could correlate with HIV health behaviors.

Major findings indicate that among YBMSM, gay community affiliation was associated with greater knowledge of PrEP and greater likelihood of having participated in a behavioral prevention program, but no such relationship was observed with regards to Black community involvement. In this study, a significant proportion of YBMSM were aware of PrEP (41%) and the majority had participated in a health promotion program within the past year (78%). These findings suggest that PrEP awareness was relatively significant among this population. Prior studies have documented PrEP awareness rates ranging from 12 to 54 percent among BMSM(Liu et al. 2008). Findings also documented that almost one quarter of the overall sample had engaged in a health promotion program. These findings are encouraging, given the elevated HIV incidence among YBMSM.

Major findings documented that greater involvement in the Black community was not associated with higher rates of PrEP knowledge or participation in HIV health promotion programs. In general Blacks, despite being similar to Whites in supporting gay civil liberties andemployment discrimination,have historically reported higher rates of disapprovalof homosexuality(Lewis,2003). It is possible that the stigma associated with being gay and the historical legacy of HIV being first framed as “a gay plague”might be attributing factors as to why PrEP knowledge and HIV health promotion programs were not associated with closeness to the Black community(Ruel& Campbell,2006). Barbershops, beauty salons, and churches are anchor institutions and cultural hubswithin Black communities. Prior studies have demonstrated that these venues can be effective STI/HIV intervention sites(Baker et al., 2012; Francis & Liverpool, 2009; Lewis, Shain, Quinn, Turner, & Moore,2002). Therefore,more efforts need to be undertaken with regards to expanding these venues as important locations for disseminating PrEP information for YBMSM.

While there were several positive health related factors associated with gay community involvement, there were also associated risks. Higher gay community involvement was correlated with greater odds of transactional sex, having sex under the influence of substances, and increased odds of self-reported HIV seropositivity. Collectively, these findings are consistent with those reported in prior studies, when gay community involvement or closeness was assessed with regards to attending bars, clubs or bathhouses(Colfax et al., 2001;Halkitis, Parsons, & Wilton, 2003; Nanín & Parsons, 2006).

In addition, major results also indicated that higher levels of Black community closeness were associated with lower odds of reporting being HIV positive. It is also likely that HIV positive persons may distance themselves from Black communities. Alternately, it is possible that close affiliation with the Black community might have resulted in lower levels of participation in the gay social and bar scene, culminating in lower HIV risk. However, given that many “closeted” or “non-gay identified men” meet sexual partners on social media, more research is needed to clarify this finding. Nevertheless, these findings document that Black community closeness was protective, however it is unclear under what mechanisms and conditions.

In summary, it is plausible that YBMSM,who feel less connected to (maybe even rejected from) the Black community, are more reliant on engaging in the informal economy as a way to make ends meet in the absence of material support. General findings also show that PrEP awareness does not equal PrEP uptake. Additionally, while closeness with the gay community is associated with PrEP awareness, it is also associated with risk behavior, including high risk sex. It might be possible that gay-community-affiliated men are more aware of PrEP because they are potentially more likely to engage in sexual risks. Moreover, HIV-positive participants may have a greater connection to the gay community because of their HIV-status. For example, they may have sought out supportive resources that increased their connection to the gay community. In this case, their HIV risk behavior may have occurred prior to their closeness with community.

Despite the significance of these findings, several limitations warrant mentioning. Although use of RDS likely reduced potential for selection biases associated with convenience or clinic samples and allowed for efficient recruitment of a large sample of BMSM, its use may have limited the generalizability of findings to BMSM in other geographic areas.Measures of closeness to the gay and Black communities were based on confirmatory factor analyses of a multiple item scale which indicated that closeness was captured by a single item (Long & Perkins, 2003;Frost& Meyer, 2011). However, there are other dimensions beyond closeness that captures community connectedness such as bonding and perceived positive benefits for such involvements which can be assessed in future studies as they may correlate with behavioral health. All findings indicate associations and do not suggest causal inferences or causality and significant relationships may be bidirectional. Qualitative studies would be useful for helping to refine this construct for YBMSM and then test its validity and reliability using survey measures. In addition, it would be important in future studies to assess sexual partner characteristics (e.g., race, genders, relationship type) and participants' primary sexual identity. Future studies using mixed methods would be needed to elucidate this and other significant findings as well as identify factors that may mediate observed relationships documented in this study. Nevertheless, these results provide preliminary and useful data on social contexts that have not been researched collectively in prior studies, and as such study findings can be used to inform future research.

Closeness to the Black community was protective with regards to lower HIV rates. Gay community involvement was mixed with regards to greater PrEP awareness and involvement in health promotion programs, but also higher drug and sexual risk behaviors. Therefore, it is important to provide supportive spaces and services to YBMSM who might be grappling with strong community, cultural and social norms while coming to terms with what it means to be YBMSM. For instance, in their qualitative study of young Black gay and bisexual men, Reed and Miller (2016) found that supportive relationships that contributed to development of a strong sense of identity and opportunities to give back to their communities promoted positive norms around health, whereas identity incongruence, social isolation, and relational disconnection were associated with development of syndemic conditions. Hence, more research, programsand initiatives are needed to help promote the positive aspects of the Black and gay communities, while minimizing the negative correlates of such involvements.

For emerging adults, managing multiple identities can be perplexing. Often, conflicts and tensions arise because YBMSM are negotiating beingBlack and gay, in addition to the other everyday stressors often associated with young adulthood (e.g. employment, finances, education, and housing) (Arnett, 2000). Researchers need better tools to measure community closeness or affiliations that capture the breadth and many dimensions of community connectedness. This study highlights how a sense of community or belonging is clearly an important correlate of behavior, both protective and risk-related, which calls for a better and comprehensive understanding of the relationship between community closeness and HIV related risks.

An important contribution of thestudyisits implicationsfor service provisionand public health interventionswith YBMSM. For service providersin agencies geared towards targeted HIV prevention and interventionwith YBMSMat individual, group and community levels,heightened attentiveness to how community involvementsand affiliations can bothsupport risk reductivebehavior(e.g., increasedPrEP awareness), andsimultaneouslyincrease the likelihood that individuals may engage in high riskactivity (e.g., having sexual intercourse while under the influence of substances, or engaging in transactional sex),canenhancethe scope of social serviceprovider responses to, and interventionswith YBMSM. By clarifyingthe nature of the relationship between YBMSM social bonds and the possibleimplications for their behavioral health,this study caninform and enhance service provider knowledgeconcerning the extent to which diverse venues of involvementavailable to YBMSM may encouragerisk-reductive sexual behaviors and/or challenge individuals' abilities to minimize or avoid them.Finally,the authors recommend that beyondsimply beingknowledgeable ofthe diversity acrosssexual and gender minority communities (e.g., race, gender, sexuality, class), service providers shouldexhibit cultural competencyconcerning thecommunity norms governingsexual behavior across diverse sites of involvement for YBMSM, and sexual and gender minorities more generally (e.g., bars/clubs, community organizations, support groups, and house and ball communities).

Acknowledgments

Grant Support: This work was supported by the National Institute of Mental Health [R01DA039934 and R01DA033875]. This manuscript was also made possible with help from the Third Coast Center for AIDS Research (P30 AI 117943).

References

Arnett JJ (2000). Emerging adulthood: A theory of development from the late teens through the twenties. American Psychologist, 55(5), 469. [PubMed: 10842426]

Arnold EA, & Bailey MM (2009). Constructing Home and Family: How the Ballroom Community Supports African American GLBTQ Youth in the Face of HIV/AIDS. Journal of Gay & Lesbian Social Services, 21(2–3), 171–188. 10.1080/10538720902772006 [PubMed: 23136464]

Ashmore RD, Deaux K, & McLaughlin-Volpe T (2004). An organizing framework for collective identity: articulation and significance of multidimensionality. Psychological Bulletin, 130(1), 80–114. [PubMed: 14717651]

Bader MDM, & Krysan M (2015). Community attraction and avoidance in Chicago: What's race got to do with it? The ANNALS of the American Acaemy of Political and Social Science, 660 (1), 261–281.

Bailey MM (2009). Performance as Intravention: Ballroom Culture and the Politics of HIV/AIDS in Detroit. Souls, 11(3), 253–274. 10.1080/10999940903088226

Bailey MM (2011). Gender/Racial Realness: Theorizing the Gender System in Ballroom Culture. Source: Feminist Studies RACE AND TRANSGENDER STUDIES, 37(2), 365–386. Retrieved from http://www.jstor.org/stable/23069907\nhttp://www.jstor.org/page/

Bailey MM (2013). Engendering space: Ballroom culture and the spatial practice of possibility in Detroit. Gender, Place & Culture, 21(4), 489–507. 10.1080/0966369X.2013.786688

Baral S, Logie CH, Grosso A, Wirtz AL, & Beyrer C (2013). Modified social ecological model : a tool to guide the assessment of the risks and risk contexts of HIV epidemics. BMC Public Health, 13(1), 1 10.1186/1471-2458-13-482 [PubMed: 23280303]

Battle J, & Harris A (2013). Connectedness and the Sociopolitical Involvement of Same-gender-loving Black Men. Men and Masculinities, 16(2), 260–267. 10.1177/1097184X13487909

Bowleg L (2013). "Once You've Blended the Cake, You Can't Take the Parts Back to the Main Ingredients": Black Gay and Bisexual Men's Descriptions and Experiences of Intersectionality. Sex Roles, 68(11–12), 754–767. 10.1007/s11199-012-0152-4

Brooks RA, Landovitz RJ, Regan R, Lee S, & V. CA, Jr (2015). Perceptions of and intentions to adopt HIV pre-exposure prophylaxis among black men who have sex with men in Los Angeles. International Journal of STDs and AIDS, 26(14), 1040–1048. 10.1177/0956462415570159

Carey JW, Mejia R, Bingham T, Ciesielski C, Gelaude D, Herbst JH, … Stall R (2009). Drug Use , High-Risk Sex Behaviors , and Increased Risk for Recent HIV Infection among Men who Have Sex with Men in Chicago and Los Angeles. AIDS and Behavior, 13(6), 1084–1096. 10.1007/s10461-008-9403-3 [PubMed: 18498049]

Colfax GN, Mansergh G, Guzman R, Vittinghoff E, Marks G, Rader M, & Buchbinder S (2001). Drug Use and Sexual Risk Behavior Among Gay and Bisexual Men Who Attend Circuit Parties : A Venue-Based Comparison. Journal of Acquired Immune Deficiency Syndrome, 28(4), 373–379.

Daniel-McCarter O (2012). Us vs. Them!: Gays and the criminalization of queer youth of color in Chicago. Children's Legal Rights Journal, 32(1), 5.

Della B, Wilson M, & Miller RL (2002). Strategies for Managing Heterosexism Used among African American Gay and Bisexual Men. Journal of Black Psychology, 28(4), 371–391. 10.1177/009579802237543

Diaz RM, Ayala G, & Bein E (2004). Sexual risk as an outcome of social oppression: Data from a probability sample of Latino gay men in three U. S. cities. Cultural Diversity and Ethnic Minority Psychology, 10(3), 255–267. 10.1037/1099-9809.10.3.255 [PubMed: 15311978]

Dickson-Gomez J, Owczarzak J, St.Lawrence J, Sitzler C, Quinn K, Pearson B, … Amirkhanian YA (2014). Beyond the Ball: Implications for HIV Risk and Prevention Among the Constructed Families of African American Men Who Have Sex with Men. AIDS and Behavior, 18(11), 2156–2168. 10.1007/s10461-014-0836-6 [PubMed: 24980248]

Francis SA, & Liverpool J (2009). A review of faith-based HIV prevention programs. Journal of Religion and Health, 48(1), 6–15. [PubMed: 19229620]

Frost DM, & Meyer IH (2011). Measuring Community Connectedness among Diverse Sexual Minority Populations. Journal of Sex Research, 49(1), 36–49. 10.1080/00224499.2011.565427 [PubMed: 21512945]

George C, Adam BD, Read SE, Husbands WC, Remis RS, Makoroka L, & Rourke SB (2012). The MaBwana Black men's study: community and belonging in the lives of African, Caribbean and other Black gay men in Toronto. Culture, Health & Sexuality, 14(5), 549–562. 10.1080/13691058.2012.674158

Gile KJ (2011). Improved inference for respondent-driven sampling data with application to HIV prevalence estimation. Journal of the American Statistical Association, 106(493), 135–146.

Grant RM, Lama JR, Anderson PL, McMahan V, Liu AY, Vargas L,… and Glidden DV (2010). Preexposure Chemoprophylaxis for HIV Prevention in Men who Have Sex with Men. The New England Journal of Medicine, 363, 2587–2599. [PubMed: 21091279]

Grayman-Simpson N (n.d.) Black Community Involvement and Subjective Well-being, 5(3).

Grossman CI, Purcell DW, Rotheram-Borus MJ, & Veniegas R (2013). Opportunities for HIV combination prevention to reduce racial and ethnic health disparities. American Psychologist, 68(4), 237–246. 10.1037/a0032711 [PubMed: 23688091]

Handcock MS, Fellows IE, & Gile KJ (2014). RDS Analyst: software for the analysis of respondent-driven sampling data, Version 0.42.

Handcock MS, Gile KJ, & Mar CM (2014). Estimating hidden population size using respondent-driven sampling data. Electronic Journal of Statistics, 8(1), 1491. [PubMed: 26180577]

Harris AC (2010). Sex , Stigma , and the Holy Ghost : The Black Church and the Construction of AIDS in New York City. Journal of African American Studies, 14(1), 21–43. 10.1007/s12111-009-9105-6

Heckathorn DD (1997). Respondent-driven sampling: a new approach to the study of hidden populations. Social problems, 44(2), 174–199.

Hightow-Weidman L, & Muessig KE (2014). Using Virtual Spaces to Engage HIV-Positive Men Who Have Sex With Men Online. Sexually Transmitted Diseases, 41(12), 756–758. 10.1097/OLQ.0000000000000210 [PubMed: 25581814]

Hill WA, & McNeely C (2013). HIV/AIDS disparity between African-American and Caucasian men who have sex with men: intervention strategies for the black church. Journal of Religion and Health, 52(2), 475–87. 10.1007/s10943-011-9496-2 [PubMed: 21538178]

Hirschi T (1969). A control theory of delinquency. In Williams FP, III & McShane MD (Eds.), Criminology theory: Selected classic readings (pp. 289–305). Cincinnati, OH: Anderson Publishing.

Hirschi T (1986). On the compatibility of rational choice and social control theories of crime. The reasoning criminal: Rational choice perspectives on offending, 105–118.

Hope EC, Keels M, & Durkee MI (2016). Participation in Black Lives Matter and Deferred Action for Childhood Arrivals : Modern Activism Among Black and Latino College Students. Journal of Diversity in Higher Education, 9(3), 203–215.

Hunter MA (2010a). All the gays are white and all the blacks are straight: Black gay men, identity, and community. Sexuality Research and Social Policy, 7(2), 81–92. 10.1007/s13178-010-0011-4

Hunter MA (2010b). All the Gays are White and all the Blacks are Straight: Black Gay Men, Identity, and Community. Sexuality Research and Social Policy, 7(2), 81–92. 10.1007/s13178-010-0011-4

Khanna AS, Michaels S, Skaathun B, Morgan E, Green K, Young L, & Schneider JA (2016). Preexposure Prophylaxis Awareness and Use in a Population-Based Sample of Young Black Men Who Have Sex With Men. JAMA Internal Medicine, 176(1), 136–138. 10.1001/jamainternmed.2015.6536.Author [PubMed: 26571368]

Khanna AS, Schumm P, & Schneider JA (2016). Annals of Epidemiology Facebook network structure and awareness of preexposure prophylaxis among young men who have sex with men. Annals of Epidemiology, 1–5. 10.1016/j.annepidem.2016.11.006

Konrad CL (2013). This is where we live: queering poor urban spaces in literature of black gay men. Gender, Place & Culture, 21(3), 337–352. 10.1080/0966369X.2013.781014

Kubicek K, McNeeley M, Holloway IW, Weiss G, & Kipke MD (2013). "It's like our own little world": Resilience as a factor in participating in the ballroom community subculture. AIDS Behavior, 17(4), 1524–1539. 10.1007/s10461-012-0205-2 [PubMed: 22618891]

Lewis YR, Shain L, Quinn SC, Turner K, & Moore T (2002). Building community trust: Lessons from an STD/HIV peer educator program with African American barbers and beauticians. Health Promotion Practice, 3(2), 133–143.

Livak B, Michaels S, Green K, Nelson C, Westbrook M, Simpson Y, … Schneider JA (2013). Estimating the Number of Young Black Men who have Sex with Men (YBMSM) on the South Side of Chicago: Towards HIV Elimination within US Urban Communities, 90(6), 1205–1214. 10.1007/s11524-013-9830-y

Long DA, & Perkins DD (2003). Confirmatory factor analysis of the sense of community index and development of a brief SCI. Journal of Community Psychology, 31(3), 279–296.

Magnani R, Sabin K, Saidel T, & Heckathorn D (2005). Review of sampling hard-to-reach and hidden populations for HIV surveillance. Aids, 19, S67–S72

Mattis JS, Beckham WP, Saunders BA, Williams JE, Mcallister DY, Myers V, … Dixon C (2004). Who Will Volunteer? Religiosity , Everyday Racism , and Social Participation Among African American Men. Journal of Adult Development, 11(4), 261–272.

Mattis JS, Jagers RJ, Hatcher CA, Lawhon GD, Murphy EJ, & Murray YF (2000). Religiosity, volunteerism, and community involvement among African American men: An exploratory analysis. Journal of Community Psychology, 28(4), 391–406.

Maulsby C, Millett G, Lindsey K, Kelley R, Johnson K, Montoya D, & Holtgrave D (2014). HIV among black men who have sex with men (MSM) in the United States: A review of the literature. AIDS and Behavior, 18(1), 10–25. 10.1007/s10461-013-0476-2 [PubMed: 23620241]

McCreesh N, Frost S, Seeley J, Katongole J, Tarsh MN, Ndunguse R, … & Sonnenberg P (2012). Evaluation of respondent-driven sampling. Epidemiology, 23(1), 138. [PubMed: 22157309]

McCune JQ (2008). "Out" in the Club: The Down Low, Hip-Hop, and the Architexture of Black Masculinity. Text and Performance Quarterly, 28(3), 298–314. 10.1080/10462930802107415

McMillan DW (1996). Sense of community. Journal of Community Psychology, 24(4), 315–325.

Meyer IH (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence Psychological Bulletin, 129(5), 674–697. [PubMed: 12956539]

Miller RL (2007). Legacy Denied: African American Gay Men, AIDS, and the Black Church. Social Work, 52(1), 51–61. [PubMed: 17388083]

Miller RL, Forney JC, Hubbard P, & Camacho LM (2012). Reinventing Mpowerment for black men: long-term community implementation of an evidence-based program. American Journal of Community Psychology, 49(1–2), 199–214. 10.1007/s10464-011-9459-5 [PubMed: 21773862]

Millett GA, Peterson JL, Flores SA, Hart TA, Jeffries WL, Wilson PA, … & Remis RS (2012). Comparisons of disparities and risks of HIV infection in black and other men who have sex with men in Canada, UK, and USA: a meta-analysis. The Lancet, 380(9839), 341–348.

Muessig KE, Pike EC, Fowler B, LeGrand S, Parsons JT, Bull SS, … Hightow-Weidman LB (2013). Putting Prevention in Their Pockets: Developing Mobile Phone-Based HIV Interventions for Black Men Who Have Sex with Men. AIDS Patient Care and STDs, 27(4), 211–222. 10.1089/apc.2012.0404 [PubMed: 23565925]

Nanín JE, & Parsons JT (2006). Club Drug Use and Risky Sex Among Gay and Bisexual Men in New York City Club Drug Use and Risky Sex Among Gay and Bisexual Men in New York City. Journal of Gay & Lesbian Psychotherapy, 10(3–4), 111–122. 10.1300/J236v10n03

Neblett RC, Davey-Rothwell M, Chander G, & Latkin CA (2011). Social Network Characteristics and HIV Sexual Risk Behavior among Urban African American Women, 88(1), 54–65. 10.1007/s11524-010-9513-x

Payne YA (2011). Site of Resilience: A Reconceptualization of Resiliency and Resilience in Street Life-Oriented Black Men. Journal of Black Psychology, 37, 426–451. 10.1177/0095798410394178

Peterson JL, & Jones KT (2009). HIV Prevention for Black Men Who Have Sex With Men in the United States COMMENTARIES HIV Prevention for Black Men Who Have Sex With Men in the United States. American Journal of Public Health, 99(6), 976–980. 10.2105/AJPH.2008.143214 [PubMed: 19372510]

Phillips G, Peterson J, Binson D, Hidalgo J, & Magnus M (2011). House/ball culture and adolescent African-American transgender persons and men who have sex with men: a synthesis of the literature. AIDS Care, 23(4), 515–20. 10.1080/09540121.2010.516334 [PubMed: 21271403]

Pitt RN (2010). "Still looking for my Jonathan": gay Black men's management of religious and sexual identity conflicts. Journal of Homosexuality, 57(1), 39–53. 10.1080/00918360903285566 [PubMed: 20069493]

Plankey MW, Ostrow D, Stall RD, Cox C, Li X, Peck JA, & P. JL (2007). The relationship between methamphetamine and popper use and risk of HIV seroconversion in the multicenter AIDS cohort study. Journal of Acquired Immune Deficiency Syndrome, 45(1), 85–92. 10.1097/QAI.0b013e3180417c99.The

Quinn DM, & Chaudoir SR (2009). Living with a cncealable stigmatized identity: The impact of anticipated stigma, centrality, salience, and cultural stigma on psychological distress and health.

Journal of Personality and Social Psychology, 97(4), 634–651. doi:10.1037/a0015815 [PubMed: 19785483]

Quinn K, Voisin DR, Bouris A, & Schneider J (2016). Psychological distress, drug use, sexual risks and medication adherence among young HIV-positive Black men who have sex with men: exposure to community violence matters. AIDS Care, 28(7), 866–872. [PubMed: 26917328]

Ramirez-Valles J (2002). The protective effects of community involvement for Hive risk behavior: a conceptual framework. Health Education Research, 17(4) 389–403. 10.1093/her/17.4.389 [PubMed: 12197585]

Rosenberg ES, Millett GA, Sullivan PS, Rio C, & Curran JW (2014). Understanding the HIV disparities between black and white men who have sex with men in the USA using the HIV care continuum : a modelling study. The Lancet HIV, 1(3), e112–e118. 10.1016/S2352-3018(14)00011-3 [PubMed: 25530987]

Rudolph AE, Gaines TL, Lozada R, Vera A, & Brouwer KC (2014). Evaluating outcome-correlated recruitment and geographic recruitment bias in a respondent-driven sample of people who inject drugs in Tijuana, Mexico. AIDS and Behavior, 18(12), 2325–2337. [PubMed: 24969586]

Ruel E, & Campbell RT (2006). Homophobia and HIV/AIDS: Attitude change in the face of an epidemic. Social Forces, 84(4), 2167–2178.

Schneider JA, Walsh T, Cornwell B, Ostrow D, Michaels S, & Laumann EO (2012). HIV Health Center Affiliation Networks of Black Men Who Have Sex With Men. Sexually Transmitted Diseases, 39(8), 1 10.1097/OLQ.0b013e3182515cee [PubMed: 22183836]

Skocpol T, &Oser JL (2004). Organization despite adversity: The origins and development of African American fraternal associations. Social Science History, 28(3), 367–437. 10.1017/S0145553200012803

Smith DK, Grohskopf LA, Black RJ, Auerbach JD, Veronese F, Cheever L, … Onorato IM (2005). Antiretroviral Postexposure Prophylaxis After Sexual , Injection-Drug Use , or Other Nonoccupational Exposure to HIV in the United States. MMWR Recomm Rep, 54(RR-2), 1–20.

Taylor RJ, Chatters LM, Hardison CB, & Riley A (2001). Informal Social Support Networks and Subjective Well-Being Among African Americans, 27(4).

Whitlock J (2007). The role of adults, public space, and power in adolescent community connectedness. Journal of Community Psychology, 35(4), 499–518.

Wong CF, Schrager SM, Holloway IW, Meyer IH, & Kipke MD (2014). Minority stress experiences and pyshcological well-being: The impact of support from and connection to social networks within the Los Angeles house and ball communities. Prevention Science, 15(1), 44–55. [PubMed: 23412944]

Table 1:

Participant characteristics among a population-based cohort of younger men who have sex with men in Chicago 2013–2014 (n=618)

	n (%)
Age, Median (IQR); Range	23 (20–25); 16–29
Annual income <$20,000	491 (79.5)
Highest level of educational attainment	
Full/part-time student currently	198 (32.0)
Less than high school	37 (6.0)
Completed high school or GED	164 (26.5)
Some college or more	219 (35.4)
Sexual behaviors/substance use (past 6 months)	
Condomless anal sex	299 (48.4)
Transactional sex	72 (11.7)
Sex with HIV unknown status partner	164 (26.5)
Sex drug use	251 (40.6)
Marijuana use (past 12 months)	468 (75.7)
STI history in past 12 months[a]	140 (22.7)
HIV positive[b]	149 (24.1)
Protective behaviors	
Ever heard of PrEP	250 (40.5)
Participated in a HIV health related behaviour change program	133 (21.5)
Tested for HIV in past 12 months[c]	364 (77.6)

[a] Any history of gonorrhea, chlamydia, or syphilis in the past 12 months.

[b] HIV status by self-report

[c] Among those without a prior diagnosis of HIV (n=469)

Table 2:

Association between community closeness[a] and HIV related behaviorsamong a population-based cohort of younger men who have sex with men in Chicago 2013–2014, (n=618)

	Closeness[a]			
	Gay Community		Black Community	
Risk behaviors	**Unadjusted OR (95% CI)**	**Adjusted OR[b] (95% CI)**	**Unadjusted OR (95% CI)**	**Adjusted OR[b] (95% CI)**
Condomless anal sex	1.08 (0.63–1.86)	1.21 (0.70–2.08)	0.87 (0.51–1.46)	0.83 (0.50–1.38)
Transactional sex	3.56 (1.41–8.99) **	3.58 (1.55–8.26) **	2.45 (0.91–6.56) ^	1.51 (0.61–3.75)
Any HIV unknown status partners	1.51 (0.83–2.77)	1.72 (0.94–3.16) ^	0.81 (0.43–1.51)	0.60 (0.31–1.17)
Sex drug use past 6m	1.68 (0.95–2.99) ^	1.99 (1.10–3.57) *	0.81 (0.45–1.47)	0.59 (0.30–1.15)
Marijuana use past 12m	1.24 (0.73–2.09)	1.17 (0.67–2.04)	1.60 (0.82–3.13)	1.45 (0.65–3.21)
HIV+ by self-report	1.33 (0.80–2.21)	1.66 (1.04–2.65) *	0.72 (0.41–1.25)	0.50 (0.29–0.88) *
Protective health behaviors				
Know of PrEP	1.54 1.00–2.36) *	1.55 (1.05–2.30) *	1.01 (0.59–1.70)	0.84 (0.51–1.39)
Tested for HIV in last year[c]	1.90 (0.99–3.63) ^	1.37 (0.77–2.43)	0.89 (0.34–2.36)	1.04 (0.45–2.41)
Participated in HIV health promotion program	1.80 (1.11–2.92) *	1.74 (1.08–2.80) *	0.96 (0.50–1.85)	0.81 (0.40–1.62)

[a] Community closeness was analyzed as a binary variable dichotomized as somewhat or very close vs. not very or not at all close).

[b] Adjusted for age, income, and gay/Black community affiliation

[c] Among those not previously diagnosed with HIV

** p<0.01

* p<0.05

^ p<0.10