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# The mediating role of social support between HIV stigma and sexual orientation-based medical mistrust among newly HIV-diagnosed gay, bisexual, and other men who have sex with men

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## ABSTRACT

HIV-related stigma and medical mistrust are significant challenges to addressing HIV inequities among gay, bisexual, and other men who have sex with men (MSM). HIV-related stigma is associated with high levels of medical mistrust, but there is limited knowledge regarding the mechanisms that link these variables. We examined the potential mediating roles of social support and coping in the relationship between perceived HIV stigma and sexual orientation based-medical mistrust among newly HIV-diagnosed MSM. We hypothesized that HIV-related stigma would be associated with mistrust and that social support, and coping would mediate this relationship. Data were obtained from 202 newly HIV-diagnosed (<1 year) MSM receiving care at community HIV clinics in New York. A path model indicated that HIV stigma was directly related to greater sexual orientation based medical mistrust, and that this relationship was mediated by social support. However, coping did not mediate the relationship between HIV stigma and mistrust. Efforts to increase social support and decrease stigma are critical for strengthening relationships between MSM and HIV care networks. Future research should assess the feasibility of designing and implementing interventions focused on increasing social network support and improving trust in the medical community among newly HIV-diagnosed MSM.

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HIV; trust; stigma; social support; coping; medical mistrust

## Introduction

Nearly 1.2 million people in the United States are currently living with HIV, which has a disproportionate impact on gay, bisexual or other men who have sex with men (collectively referred to as MSM hereafter). In 2019, 69% of new HIV diagnoses in the US occurred among adult and adolescent MSM (Centers for Disease Control and Prevention, 2019). While advances in HIV treatment and care have improved outcomes for people living with HIV (PLWH), access, utilization, and adherence to care are far from universal. There are steep gaps along the HIV care continuum; approximately 86% of PLWH have been diagnosed, and only about 56% are virally suppressed. Furthermore, only 80% of those diagnosed with HIV are linked to care within the first

month (Centers for Disease Control and Prevention, 2021).

The significant drop-off in care engagement may in part be explained by intersectional stigma, specifically HIV-related stigma, systematic racism, and homophobia, which contribute to medical mistrust (Lutete et al., 2022). Link and Phelan define stigma as the convergence of a power differential that allows the labeling, separating and stereotyping of individuals or groups and results in discrimination and a loss of status (Link & Phelan, 2001). The term intersectionality describes how people's experiences are the consequence of the combination of different identities (Bowleg, 2012). MSM often face discrimination and shame from family, community and healthcare providers (Meyer, 2003).

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Additionally, many PLWH who identify as LGBTQ live in environments that stigmatize them on multiple fronts. Meyer's *Minority Stress Model* explains how experiences of stigma affect the mental health, stress processes, and coping behaviors of sexual minorities living with HIV (Meyer, 2003). Meyer posits that the stigma, prejudice, and discrimination experienced by individuals as a result of their minoritization creates a hostile, stressful social environment, which in turn affects mental health. Being a part of a minority status group, such as being a racial/ethnic minority, living with HIV, and identifying as LGBTQ, can expose individuals to multiple types of stigma, prejudice, and discrimination, increasing the likelihood of negative mental health consequences (Díaz et al., 2006), and negatively impact how individuals appraise the threat of a stressor, engage in help-seeking behaviors, and utilize healthcare (Mink et al., 2014).

Few studies have examined the pathways by which stigma and stress affect MSM and contribute to health outcomes (Rendina et al., 2016). Social support and coping behaviors are two potential mechanisms by which HIV- and homophobic-related stigma might affect health outcomes. Social support describes the psychosocial and material resources that may mediate the relationship between life stress and health outcomes (Cohen & Wills, 1985). Strong social support systems have been consistently linked to both reduced stigma and significant improvements in HIV-related health outcomes (Enriquez et al., 2015; Hill et al., 2017; Kelly et al., 2014; Li et al., 2017; Simoni et al., 2006; Vyavaharkar et al., 2011). Recently, researchers have found social support to play a protective role in relationship between stigma and mental and physical health outcomes among HIV-positive populations (Earnshaw et al., 2015; Li et al., 2017). For example, recent research on PLWH indicates that social support can mitigate the effects of anticipated HIV-related stigma on HIV symptoms (Earnshaw et al., 2015) and mediate the effects of self-stigma on depression (Li et al., 2017). Social support can also affect the way that individuals cope with HIV-related stigma by facilitating either adaptive or maladaptive strategies for managing distress (Thoits, 1986). Further, how individuals cope with HIV – whether through adaptive or maladaptive strategies – may impact care engagement. Maladaptive coping strategies, such as denial and self-blame, have been associated with reduced treatment adherence and increased viral load (Moskowitz et al., 2009). However, adaptive coping strategies, such as emotional and instrumental support-seeking and planful problem solving, have been associated with positive health outcomes such

as reduced HIV symptoms and improved viral load suppression (Ironson & Hayward, 2008; Moskowitz et al., 2009).

Seeking care from healthcare professionals is a vital and lifesaving coping behavior for PLWH. However, medical mistrust can often be a barrier to care engagement among marginalized groups like MSM living with HIV (Brincks et al., 2019; Eaton et al., 2015). Medical mistrust describes the suspicion or lack of confidence felt towards medical professionals, systems, or organizations. People who report having higher rates of medical mistrust are less likely to attend doctor's visits and follow provider's recommendations, (Sheppard et al., 2013; Thrasher et al., 2008; Whetten et al., 2008) which has negatively impacted healthcare utilization and adherence among PLWH (Dale et al., 2016; Galvan et al., 2017). Literature on medical mistrust has generally focused on the impact of historical racism on relationships that African Americans and other racial and ethnic minorities have with the US medical system (Gamble, 1997). There are myriad reasons for LGBTQ communities to be distrustful of healthcare providers, not least of which that homosexuality was listed as a mental disorder in the Diagnostic and Statistical Manual of Mental Disorders until 1973 (Drescher, 2010). With the onset of HIV and AIDS in the US in the late 1980s, patients, often young gay and bisexual men, faced additional and substantial discrimination from providers, researchers, and policy makers (Graham et al., 2010). The systemic discrimination of the past compounded by present-day stigma faced by sexual minorities has led several researchers to begin exploring medical mistrust among sexual minorities (Brenick et al., 2017; Eaton et al., 2015).

Stigma may contribute to medical mistrust among LGBTQ patients living with HIV, and this can negatively affect healthcare utilization and health outcomes (Lutete et al., 2022). Through the lens of the minority stress model, this study aims to examine how HIV-related stigma relates to medical mistrust in a racially diverse sample of newly HIV-diagnosed gay, bisexual and other men who have sex with men (MSM). MSM have an elevated risk for HIV transmission when compared to other at-risk populations, and a significant proportion never achieve viral suppression (Centers for Disease Control and Prevention, 2015). A better understanding of factors that influence HIV treatment, such as medical mistrust, is key to reducing the disproportionate burden of the HIV/AIDS epidemic among MSM. A path model was used to examine the relationships between internalized HIV-related stigma, social support, coping behaviors, and sexual orientation-related medical mistrust. As participants in the current

study were recently diagnosed with HIV, and were from diverse racial/ethnic backgrounds, sexual orientation-related medical mistrust was examined instead of race- or HIV-related medical mistrust. The path model tested the following hypotheses: (1) greater HIV-related stigma will be related to higher medical mistrust among newly HIV diagnosed MSM; (2) social support, adaptive coping, and maladaptive coping will mediate the association between HIV-related stigma and medical mistrust; and (3) social support will have an indirect effect on medical mistrust via adaptive and maladaptive coping.

## Methods

### Participants and procedures

Data from this study were collected during the baseline assessment for a larger health promotion intervention study for newly HIV-diagnosed MSM between November 2012 and March 2017. Men were recruited through two community HIV clinics in New York City. To be eligible for the study, participants must have received an HIV diagnosis within the past year via testing at one of the clinics, or after being referred to one of the clinics for treatment and care following a positive diagnosis at another site. Participants either had to begin care at one of the community HIV clinics, or grant researchers access to their medical records while receiving care at another site. Each participant was over 18 years of age and gave written informed consent.

Of 275 men who presented for screening, 202 men were eligible and enrolled in the study. To increase privacy, screening and baseline assessments were administered using an audio computer-assisted self-interview which required approximately 90 min to complete. Participants received \$40 as an incentive for completing the assessments. All study procedures were approved by the institutional review boards at Yale University, Columbia University and the University of Georgia.

### Measures

#### Coping

The Brief COPE scale was used to assess participant coping strategies (Carver, 1997). The scale contains 28 items covering various types of coping across fourteen subscales. Example items included “I’ve been turning to work or other things to take my mind off things”, “I’ve been using alcohol and other drugs to make myself feel better”, and “I’ve been getting comfort and understanding from someone”. Participants answered each item on a four-point Likert scale (1 = I haven’t been

doing this at all, 2 = I’ve been doing this a little bit, 3 = I’ve been doing this a medium amount, and 4 = I’ve been doing this a lot). We used Mplus software to conduct an exploratory factor analysis of the fourteen subscales of the instrument. Using a minimum factor loading of 0.5, we found two latent variables in the scale, which we labeled adaptive and maladaptive coping. Six items were removed as they did not have strong loadings on either factor (<0.5). Adaptive coping included the following subscales: self-distraction, positive reframing, planning, acceptance, and both emotional and instrumental support seeking. Conversely, maladaptive coping strategies included the following subscales: denial, substance abuse, disengagement, and self-blame. The overall scale and both the adaptive and maladaptive subscales demonstrated good internal consistency (Cronbach’s alpha = .832, .881, and .761, respectively).

#### Stigma

The HIV Stigma Scale is a 40-item instrument used to assess stigma related to HIV status (Berger et al., 2001). For the current study, we used a shortened 33-item version (Bunn et al., 2007). Items included “I feel guilty because I have HIV”, “Telling someone I have HIV is risky”, and “Having HIV makes me feel unclean”. Participants were asked to respond to each of the items on this survey by choosing from a four-point Likert scale, with choices ranging from 0 (*Strongly disagree*) to 3 (*Strongly agree*). In the current sample, the instrument demonstrated good internal consistency (Cronbach’s alpha = .94).

#### Social support

The Perceived Availability of Social Support Scale (O’Brien et al., 1993) contains seven items pertaining to participants’ perceptions of the amount of support their social network can give. Items include “I have someone to talk to if I’m upset”, “I have someone to help me if I’m bedridden”, and “I have someone to give me information or guidance”. Each item was answered on a five-point Likert scale from 1 (*Definitely not*) to 5 (*Definitely yes*). In the current sample, this instrument demonstrated good internal consistency (Cronbach’s alpha = .92).

#### Medical mistrust

The Group-Based Medical Mistrust scale was originally developed to measure mistrust of medical institutions based on belonging to a specific racial or ethnic minority group (Thompson et al., 2004). For this study, we adapted the measure to reflect medical mistrust based on belonging to a sexual minority group. The

adapted measure contains eleven items pertaining to sexual minority-based medical mistrust. Each item was answered on a five-point Likert scale from 1 (“*Strongly disagree*”) to 5 (“*Strongly agree*”). An example item is “I have been treated poorly or unfairly by a doctor or healthcare workers because of my sexual orientation”. In the current sample, the adapted measure demonstrated good internal consistency (Cronbach’s alpha = .86).

### Data analysis

Prior to analysis, all key variables were examined for frequency distributions and measures of central tendency. To investigate the indirect effects of HIV-related stigma on sexual orientation-related medical mistrust through the potential mediating variables perceived social support and coping strategies, we conducted a path analysis using Mplus software (Muthen & Muthen, 2017). Model fit was examined using common fit statistics, including a chi-square test of model fit, the comparative fit index (CFI), the Tucker-Lewis Index, and the root mean square error of approximation.

## Results

Participants were between the ages of 18–60, including 41.6% of whom identified as Black or African American, 25.2% as Hispanic/Latino, and 16.3% as White (See Table 1 for complete demographic information). Prior to conducting the path analyses, bivariate relationships between each of the study variable were computed (See Table 2). These values supported most of the relationships proposed in the path model (See Figure 1), including a statistically significant positive correlation between HIV-related stigma and medical mistrust ( $r = .182, p < .05$ ) and a statistically significant negative

correlation between medical mistrust and social support ( $r = -.337, p < .01$ ). HIV-related stigma was not correlated with adaptive coping; however, it was negatively correlated with social support ( $r = -.206, p < .01$ ) and positively correlated with maladaptive coping ( $r = .559, p < .01$ ). Finally, social support was correlated with all the other study variables ( $r$ 's ranged from  $-.337$  to  $.366$ , all  $p < .05$ ).

A path analysis was used to test the hypothesis that the relationship between HIV-related stigma and sexual orientation-related medical mistrust would be mediated by perceived social support as well as adaptive and maladaptive coping strategies. The proposed path model demonstrated acceptable fit with study data (chi-square = 3.927 (2),  $p = .140$ ; CFI = .987; TLI = .933; and RMSEA = .070), and most hypothesized relationships were supported. A positive direct effect was found between HIV-related internalized stigma and medical mistrust ( $B$  (SE) = .184 (.071),  $p < .01$ ), indicating that the more internalized stigma a participant feels the more sexual orientation-related medical mistrust they experience. Further, a significant indirect effect was identified, with social support mediating the relationship between HIV-related stigma and sexual orientation-related medical mistrust ( $B$  (SE) = .048 (.023),  $p < .05$ ). Specifically, the path analysis shows support for the idea that social support attenuates the positive relationship between stigma and medical mistrust. Finally, the hypothesized indirect effects of HIV-related stigma on medical mistrust through adaptive and maladaptive coping were not supported by the path analysis. In other words, there was no evidence that coping strategies mediated the relationship between stigma and medical mistrust. The mediated path model and standardized path coefficients are illustrated in Figure 1.

## Discussion

We found that higher levels of HIV-related stigma predicted greater medical mistrust. Moreover, we found that the perceived availability of social support mediated the effect of HIV stigma on sexual orientation-based

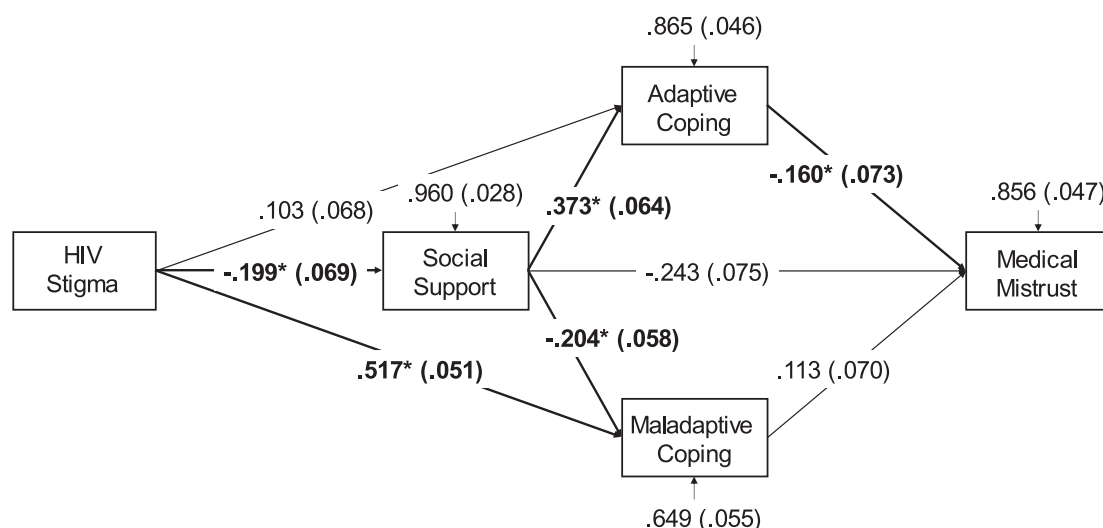
**Table 1.** Demographic characteristics of participants.

Characteristic	M (SD), range or N (%)
Age	31.99 (9.10), 18–60
Race/Ethnicity	
White	33 (16.3)
Black/African American	84 (41.6)
Latino/Hispanic	51 (25.2)
Asian/Pacific Islander	6 (3)
Multiracial	21 (10.4)
Other	6 (3)
Refuse to answer	1 (5)
Sexual orientation	
MSM	173 (85.6)
Bisexual	25 (12.4)
Heterosexual	2 (1)
Refuse to answer	2 (1)
Gender	
Cisgender	194 (96)
Transgender (male)	2 (1)
Transgender (female)	6 (3)

**Table 2.** Means, standard deviations, and correlations between study variables.

Variable	1	2	3	4	5
1. Medical mistrust	–				
2. Stigma	.182*	–			
3. Social support	–.337**	–.206**	–		
4. Adaptive coping	–.246**	.030	.366**	–	
5. Maladaptive coping	.186*	.559**	–.288*	.042	–
Mean	2.21	1.42	3.71	2.80	1.94
Standard deviation	.76	.58	1.02	.72	.73

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



**Figure 1.** Results of path analysis examining the effects of HIV-related stigma on sexual orientation-related medical mistrust through the variables social support, adaptive coping and maladaptive coping. \*Displayed path values indicate  $B$  (standard error). Values in bold and marked with an asterisk are significant ( $p < .05$ ).

medical mistrust, whereas maladaptive and adaptive coping did not.

Our results support previous research and theory that highlight the susceptibility of LGBTQ groups to HIV stigma and medical mistrust (Bogart et al., 2011; Brenick et al., 2017; Dowshen et al., 2009; Logie et al., 2011; Logie et al., 2012). Social stigmas, such as HIV-related stigma and homophobia, are key psychosocial issues that prohibit active participation in healthcare among PLWH. This is especially true among marginalized groups, such as sexual and racial minorities. The detrimental effects of multiple forms of medical mistrust on HIV risk and treatment behaviors are also well-documented by studies demonstrating increased unprotected intercourse, (Bogart et al., 2011; Hoyt et al., 2012) lower HIV testing rates, (Hoyt et al., 2012) suboptimal antiretroviral therapy (ART) adherence, (Dale et al., 2016; Kalichman et al., 2015; Thrasher et al., 2008) and lower rates of care utilization (Eaton et al., 2015) among groups with lower levels of provider trust. Collectively, these findings underscore the critical need for programs that bridge the LGBTQ and medical communities and address HIV-related stigma and medical mistrust.

We also found social support to be a significant contributor to the relationship between HIV-related stigma and medical mistrust (Krause & May, 2016; Logie et al., 2011). This suggests that when MSM feel as though they have a strong support network, the relationship between HIV-related stigma and medical mistrust is reduced. This finding accentuates the importance of quality patient-provider relationships within HIV care settings. The results of past studies indicate that former or proxy

experiences with medical personnel can act as a facilitator or barrier to care engagement. Whereas negative interactions often deter care-seeking, quality relationships with physicians and caseworkers can improve engagement and retention in care and ART use (Beach et al., 2006; Hill et al., 2017). Unfortunately, heterosexism and discriminatory treatment within health care settings have been documented as common sources of perceived stigma and social exclusion among LGBTQ individuals living with HIV (Logie et al., 2011). While our findings are consistent with other research identifying social support as a mediating variable between HIV stigma and health outcomes (Breet et al., 2014; Nahas et al., 2015), we note that social support has often been conceptualized as a moderating variable between stressors and health outcomes. For the current study, we choose to look at social support as a mediating variable, or potential mechanism of change within a causal path model, to examine social support as potential intervention target. Overall, we believe our findings support the idea that culturally sensitive and inclusive care that enhances social support can reduce the harmful effects of HIV stigma on mistrust among newly diagnosed MSM.

Although many HIV treatment and education programs encourage adaptive coping skills and discourage maladaptive coping among PLWH, our results suggest that neither adaptive nor maladaptive coping strategies mediate the relationship between HIV-related stigma and sexual orientation-related medical mistrust. There was a significant negative bivariate relationship between adaptive coping and medical mistrust. However, within the path model, the hypothesized

pathways between HIV-related stigma, coping, and sexual orientation-based medical mistrust were not statistically significant. These results suggest that social support, rather than coping strategies, influences how HIV-related stigma affects trust in medical services and providers, and adds to the body of evidence demonstrating mixed effects of coping on HIV stigma and other psychosocial variables (Chaudoir et al., 2012; Earnshaw et al., 2015; Emler et al., 2013; Logie et al., 2012; Sanjuán et al., 2013).

The study has limitations that should be noted. First, the cross-sectional design limited our ability to make causal inferences concerning the associations between the examined variables. A prospective examination of HIV stigma, social support, and medical mistrust is necessary to identify the temporal ordering of relationships and potential causal pathways between these variables. Further, longitudinal research could provide important insight into how the relationships between intersectional stigma (HIV, race/ethnicity, sexual/gender identity-related stigmas) social support, medical mistrust and care engagement/health outcomes evolve over time. Second, the current study used a measure of general social support. Although our conclusions extend to the provision of support within the healthcare environment, we did not directly measure support from providers as separate from other potential support sources (e.g., family, friends). Future research should clarify the source of social support involved in mediating the relationship between HIV stigma and medical mistrust. Third, coping was assessed in relation to coping with a new HIV diagnosis. It is possible that coping related to other stressors may have a stronger relationship with sexual orientation-related medical mistrust and other study variables. Finally, while our sample size was reasonable for the path analysis conducted in this study, it is possible that the sample size was such that small but significant effects related to coping variables in mediating paths were missed.

We believe that these study findings have potentially important implications for practice, particularly in relation to how stigma affects trust in the medical system and engagement in care among PLWH. Our study was conducted with a sample of racially and ethnically diverse MSM, and it is likely that intersectional forms of stigma based on multiple identities and situations contributed to medical mistrust. Intersectional stigma may exacerbate observed health disparities within the HIV care system (Bowleg, 2012; Turan et al., 2017) and there is a clear need for research that can clarify the intersectional nature of stigma among marginalized groups (Turan et al.,

2019; Watkins-Hayes, 2014). Such research is critical to filling research gaps concerning the multifaceted complexity and health implications associated with stigma and mistrust among marginalized groups.

Community outreach programs involving community leaders and members from the LGBTQ community may assist in destigmatizing HIV while fostering sustainable ties between the practice community and MSM. Community leaders within the LGBTQ community can also serve as instrumental resources for informing the development of culturally sensitive and relevant support programs and interventions for newly diagnosed MSM. Institutional policies directed towards evaluating the effectiveness of existing HIV care support programs may improve the overall care infrastructure. Ultimately, the implementation of cultural sensitivity training and patient-centered approaches within clinical settings is needed to promote a supportive atmosphere while reducing stigma and suspicion of formalized care.

## Conclusion

While several studies have examined the linkages between medical mistrust and HIV treatment behaviors, this study is one of the first to investigate the psychosocial mechanisms that mediate the pathways between stigma and medical mistrust. Our results suggest that increased social support among newly diagnosed MSM may reduce the negative effects that HIV-related stigma has on medical mistrust. Programs designed to increase perceived social support from the medical and greater community may assist in alleviating the harmful effects of HIV stigma on trust in the HIV treatment and care system addressing the needs of MSM who have been newly diagnosed with HIV.

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