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Promoting the Sexual Health of MSM in the Context of Comorbid Mental Health Problems

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Abstract

Despite the moderate efficacy of HIV prevention interventions for at risk gay, bisexual, and other men who have sex with men (MSM), MSM continue to represent the largest group of new HIV infections and the largest number of individuals living with HIV in the US. Environmental factors such as sexual minority stress increase the vulnerability of MSM for mental health problems. These mental health problems can be a barrier to consistently engaging in self-care health behaviors such as sexual risk reduction. We consider the following observations critical to identifying priorities for HIV prevention among MSM: (1) gay, bisexual and other MSM have higher rates of mental health problems than general population estimates; (2) these mental health problems co-occur with each other and interact synergistically to increase HIV risk; and (3) comorbid mental health problems may compromise the impact of prevention programs, and integrating treatment of mental health issues into prevention programs may improve program efficacy. Novel prevention interventions for at risk MSM that integrate programming with the treatment of co-occurring and interfering mental health issues are the most promising avenue to increase prevention intervention efficacy and effectiveness. By addressing significant mental health issues and supporting broad based prevention efforts at the individual and community level, there is also the potential to improve the overall quality of life and public mental health of gay, bisexual, and other MSM.

Keywords

Men who have sex with men; MSM; Syndemics; HIV prevention; Mental health

Introduction

HIV prevention interventions in the US for men who have sex with men (MSM) have been relatively successful [1–3] and cost-effective [4]. However, although the majority of MSM protect themselves and their sexual partners, the need for efficacious prevention

interventions grows ever more urgent as gay, bisexual and other MSM continue to represent the largest at-risk group in the US, with 28,700 new cases per year representing 53% of all new infections [5]. The average impact of HIV prevention interventions on self-reported sexual risk behavior has been estimated at a 23% reduction [2]. These effects are modest and subject to improvement by addressing the complex needs of the at-risk “real world” MSM who are at greatest risk for HIV acquisition.

In this commentary we present the argument that HIV prevention interventions for MSM can improve their effectiveness if they also address comorbid psychosocial problems. This argument is supported by three central sets of findings (1) MSM have higher rates of distress and mental health problems than heterosexuals, in part due to the developmental and ongoing societal challenges related to establishing sexual minority identities, (2) these mental health problems co-occur with each other at high rates and interact synergistically to increase HIV risk, and (3) comorbid mental health problems may compromise the impact of traditional prevention programs, overwhelming existing theory driven models.

Mental Health among MSM

MSM are disproportionately affected by mental health problems. Epidemiological studies demonstrate that sexual minorities are at increased risk for depressive, anxiety, and substance use disorders [6–8]. Similarly, among HIV-infected men, there are elevated rates of depression, posttraumatic stress (PTSD), other anxiety disorders, and substance use disorders [9–13]. A nationally representative probability sample of HIV-infected individuals reports a prevalence rate for major depressive disorder of 36% which contrasts with a 7.6% prevalence rate in a national sample of uninfected individuals using a similar assessment instrument [10]. Although this study did not analyze prevalence rates as a function of sexual orientation, MSM make up the largest group of individuals with HIV.

Why might there be higher rates of mental health problems among MSM than heterosexual men? Sexual minority stress likely plays a role. Sexual minority stress is defined as “... excess stress to which individuals from stigmatized social categories are exposed as a result of their social, often a minority position” [14, p. 675]. Examples of sexual minority stress include stigma, prejudice, internalized homophobia, concealing one’s identity, and expectations of rejection due to one’s sexuality. In addition, the socialization pressures on gay men to present themselves as traditionally masculine, and the negative consequences for behaving in gender atypical ways can result in increased distress [15–17]. These types of stressors may represent vulnerabilities for the subsequent development of mental health problems among gay men [14, 18].

Recently, Hatzenbuehler and colleagues have suggested mediating pathways linking minority stressors to mental health problems. These pathways include coping/emotional regulation (e.g., strategies used to increase, decrease, or maintain an emotional response), social/interpersonal problems (e.g., isolating oneself from others), and maladaptive cognitive constructs (e.g., negative beliefs about oneself; thoughts of hopelessness) [19, 20]. This work suggests that community-based or structural interventions that reduce sexual minority prejudices, in combination with individual-based interventions that address maladaptive psychological processes, may help to alleviate the high rates of mental health problems among MSM.

Mental Health and HIV Risk among MSM

Among MSM, mental health problems are also associated with HIV risk. Studies of co-occurring psychosocial problems, “syndemics”, show that there is an additive risk with each psychological problem with respect to sexual risk taking behavior in MSM. Stall et al. [21]

reported that as MSM endorsed a greater number of psychological problems, their risk for engaging in sexual risk behaviors grew, as did their risk for HIV infection. Mustanski et al. [22] found synergistic effects of multiple psychological risk factors on sexual risk taking in young HIV-negative MSM. Our own recent work suggests that this phenomenon may also extend to HIV-infected MSM. In a sample of 380 HIV-infected MSM, those with 1–3 syndemic indicators (childhood sexual abuse, PTSD, anxiety disorders, depression, polysubstance use, alcohol abuse) had a greater than two-fold increase in the likelihood of sexual transmission risk behavior, whereas those with 4 or more syndemic indicators experienced a fourfold increase in likelihood of sexual transmission risk behavior [12]. These complex and interfering relationships between sexual risk and multiple comorbid mental health issues has also been recently reported in samples of HIV-infected [23, 24] and uninfected [25, 26] people managing serious mental illness.

It is worth noting that among these syndemic conditions, depression and posttraumatic stress reactions to traumatic events may confer particular risk for sexual risk behavior among MSM. Although the relationship between depression and sexual risk for HIV is likely complex and nonlinear [27], it has been suggested that moderate levels of depression may confer additional risk for sexual risk taking [28]. This is consistent with findings reported from the EXPLORE cohort of 4,295 HIV-negative MSM [29], where those with the second quartile of depression scores were significantly more likely to acquire HIV during the study period compared to those in the other quartiles.

Accommodating Mental Health into HIV Prevention Interventions in MSM

Notwithstanding the high rates of mental health problems among HIV-negative and HIV-positive MSM, there are few interventions that integrate treatment for mental health issues into sexual risk reduction. This is problematic because mental health problems may moderate the degree to which prevention interventions can be effective. A secondary analysis of the EXPLORE study data reported that a history of childhood sexual abuse not only contributed to increased transmission risk among MSM but also interfered with uptake of the prevention intervention [25]. In a conceptual review of the literature, Sikkema et al. [30] highlighted the salient role that mental health treatment offers in reducing transmission risk behaviors among HIV-infected individuals.

There is a rich literature of empirically supported cognitive behavioral treatments for a broad range of mental health problems [31] which can serve as a base for integrating the treatment of psychosocial problems in MSM with HIV prevention interventions. Cognitive behavioral therapies are generally short-term, with the typical duration of therapy lasting between 12 and 20 sessions, and comprise a wide range of empirically supported behavior change technologies. However, these technologies are largely untested in the treatment of comorbid psychopathology that place MSM at increased risk for HIV acquisition or transmission.

There is promising initial work suggesting that such strategies may be effectively used to treat comorbid mental health issues to support reductions in sexual risk behavior in MSM. For instance, in our group, we are integrating cognitive therapy [32] to address childhood sexual abuse-related trauma in the context of sexual risk reduction counseling for use with MSM at risk for HIV [33]. We are also testing the integration of behavioral activation and HIV risk reduction interventions in HIV-negative MSM who abuse methamphetamines [34]. Behavioral activation teaches these individuals how to re-engage in non-substance related activities that were found to be enjoyable before high levels of substance use. This would hypothetically lead to a decrease in distress, which in turn would result in reductions in both unsafe sexual practices and substance use.

Co-occurring mental health problems may also call into question some of the assumptions underlying our theoretical models of behavior change. Almost all models of sexual risk taking behavior are based on social psychological theories that may not fully consider the impact of comorbid psychiatric disorders. For instance, one of the most widely applied theories, social-cognitive theory [35–37], implicates positive (e.g., reducing STI/HIV infections) and negative (e.g., condoms make sex less enjoyable) social norms in the causal pathway to self-efficacy beliefs concerning safer sex practices. This in turn predicts actual condom use. Mental health problems or diagnoses may be related both directly to these normative appraisals, and indirectly by altering the interrelationships between these variables.

We recently examined the utility of the social-cognitive model of HIV transmission in a sample of HIV-infected MSM, examining its viability in those who screened in for clinical depression (a serious mental illness characterized by clinically significant distress and impairment) and those who did not [38]. In the most well-known theory of depression [39] negative attributions about oneself, others, and the world predominate. These can certainly affect social-cognitive variables and their association to HIV risk. In our analysis, there was an excellent fit between the data and the social-cognitive model for HIV-infected MSM who were not depressed; however, for their depressed counterparts, the data did not fit the model. For depressed HIV-infected MSM, the conduit of the model—self-efficacy—was not associated with HIV transmission risk [38].

This is the first empirical test of the impact of depression on the hypothesized relationships specified by the underlying sexual behavior change model. However, other syndemic indicators such as PTSD, substance abuse, anxiety disorders, and interpersonal violence, may have as powerful effects on models of HIV risk. Additionally, this analysis was specific to the social-cognitive model as an example, but in theory, one could apply such reasoning to other social psychology models of HIV-related behavior which serve as the basis for individual interventions such as the information-motivation-behavioral (IMB) model [40], the theory of reasoned action [41], or the health belief model [42]. The interference caused by comorbid mental health issues in MSM at risk for acquiring or transmitting HIV appears to reduce the efficacy of our interventions for these men and suggests that theoretical models may not yet have sufficient complexity to account for this interference.

It is worth noting that in recent years there has been a broad based call for the expansion of behavioral prevention technology to address the mental health context of at risk MSM and to increase the efficacy and effectiveness of those programs [1, 2, 21, 29, 43]. We add our voices to the eloquent and empirically derived conclusions of some of our most experienced colleagues cited below:

Evaluations of the effects of behavioral interventions designed specifically for the sub groups of MSM and the effects of interventions adapted and tailored for these subgroups should be accorded a high priority in the behavioral intervention research portfolio. Herbst et al. [2, p. 238].

When selecting interventions for PLWH prevention providers should consider... integrating theory-based prevention within routine medical care and services addressing aspects of mental health. Crepez et al. [1, p. 154].

Men who are mired in the combined effects of depression, substance abuse, and violence may not have the capacity to reduce their sexual risk. Intervention designs can be evaluated to test whether such work is especially efficacious among MSM who are battling multiple health problems. Stall et al. [21, p. 942].

Interventions must address the evidence that a ‘syndemic’ of multiple health and mental health issues— HIV risk behaviors, substance use and depressive symptoms —is occurring among MSM...and current HIV prevention programs need to be adapted or changed to focus on substance use ... and other mental health issues, along with HIV risk reduction, in order have an impact within various subpopulations. Koblin et al. [29, p. 736].

Conclusions

The presence of comorbid mental health issues among gay, bisexual and other MSM at risk for HIV is all too common. These mental health issues compromise the effectiveness of our prevention efforts and strain our conceptual models. Co-occurring mental health issues represent the functional context in which the emerging HIV prevention models must be grounded. Just as MSM at risk for HIV who are also managing comorbid mental health issues have difficulty reaping benefits from traditional individual-based risk reduction programs, these men may also be particularly ill-equipped to benefit from public health campaigns, and community based or structural interventions.

Individual or small group based interventions that address sexual risk for HIV within the context of addressing comorbid mental health issues may provide at risk MSM with the additional support they need to respond more fully to these other intervention modalities. Similarly, the contemporary emphasis on a multifactorial approach to prevention stresses the importance of test and treat models and effective ART treatment as HIV prevention strategies [23, 44, 45]. This emphasis also underscores the importance of developing efficacious individual prevention programs for MSM placed within the context of comorbid mental health problems. This is because mental health issues that interfere directly with sexual health among MSM at risk for HIV (e.g., depression, trauma histories) also function as barriers to care [13] and treatment adherence [46, 47] in addition to sexual transmission risk [23] for those already living with HIV.

Integrated, individual-based, prevention programs that incorporate empirically supported cognitive behavioral strategies to address interfering mental health issues will be well placed to improve the efficacy and effectiveness of our prevention programming. Successful remediation of the mental health challenges faced by at risk MSM will support multiple prevention efforts and may empower the riskiest members of our community to reap more benefit from other prevention modalities.

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References

1. Crepaz N, Lyles CM, Wolitski RJ, et al. Do prevention interventions reduce HIV risk behaviors among people living with HIV? A meta-analytic review of controlled trials. *AIDS*. 2006; 20:143–57. [PubMed: 16511407]
2. Herbst JH, Sherba RT, Crepaz N, et al. A meta-analytic review of HIV behavioral interventions for reducing sexual risk behaviors of men who have sex with men. *J Acquir Immune Defic Syndr*. 2005; 39:228–41. [PubMed: 15905741]
3. Lyles CM, Kay LS, Crepaz N, et al. Best-evidence interventions: findings from a systematic review of HIV behavioral interventions for U.S. populations at high risk, 2000–2004. *Am J Public Health*. 2007; 97:133–43. [PubMed: 17138920]

4. Herbst JH, Becker C, Mathew A, et al. The effectiveness of individual-, group-, and community-level HIV behavioral reduction interventions for adult men who have sex with men. *Am J Prev Med.* 2007; 32:S38–67. [PubMed: 17386336]
5. Centers for Disease Control and Prevention. [Accessed 18 Jul 2010.] HIV and AIDS among gay and bisexual men. 2010. <http://www.cdc.gov/nchhstp/newsroom/docs/FastFacts-MSM-FINAL508COMP.pdf>
6. Cochran SD, Mays VM. Relation between psychiatric syndromes and behaviorally defined sexual orientation in a sample of the US population. *Am J Epidemiol.* 2000; 151(5):16–23.
7. Cochran SD, Sullivan JG, Mays VM. Prevalence of mental disorders, psychological distress, and mental services use among lesbian, gay, and bisexual adults in the United States. *J Consult Clin Psychol.* 2003; 71:53–61. [PubMed: 12602425]
8. Sandfort TGM, de Graaf R, Bijl RV, Schnabel P. Same-sex sexual behavior and psychiatric disorders: findings from the Netherlands mental health survey and incidence study (NEMESIS). *Arch Gen Psychiatry.* 2001; 58:85–91. [PubMed: 11146762]
9. Applebaum AJ, Bullis JR, Traeger LN, et al. Rates of mood and anxiety disorders and contributors to continued heroin use in methadone maintenance patients: a comparison by HIV status. *Neurobehav HIV Med.* 2010; 2:49–57.
10. Bing EG, Burnam MA, Longshore D, et al. Psychiatric disorders and drug use among human immunodeficiency virus-infected adults in the United States. *Arch Gen Psychiatry.* 2001; 58(8): 721–8. [PubMed: 11483137]
11. Boarts JM, Sledjeski EM, Bogart LM, et al. The differential impact of PTSD and depression on HIV disease markers and adherence to HAART in people living with HIV. *AIDS Behav.* 2006; 10:253–61. [PubMed: 16482405]
12. O’Cleirigh, C.; Mimiaga, M.; Safren, SA., et al. Synergistic effects of psychosocial and substance use problems on increased sexual transmission risk among HIV-infected men who have sex with men. XVIII International AIDS Conference; 2010; Vienna.
13. O’Cleirigh C, Skeer M, Mayer KH, et al. Functional impairment and health care utilization among HIV-infected men who have sex with men: the relationship with depression and post-traumatic stress. *J Behav Med.* 2009; 32:466–77. [PubMed: 19526337]
14. Meyer IH. Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence. *Psychol Bull.* 2003; 129:674–97. [PubMed: 12956539]
15. Blashill AJ, Powlishta KK. The impact of sexual orientation and gender role on evaluations of men. *Psychol Men Masc.* 2009; 10:160–73.
16. Martin CL. Attitudes and expectations about children with nontraditional and traditional gender roles. *Sex Roles.* 1990; 22:151–65.
17. Blashill AJ, Hughes HM. Gender role and gender role conflict: preliminary consideration for psychotherapy with gay men. *J Gay Lesbian Ment Health.* 2009; 13:170–86.
18. Stall, R.; Friedman, M.; Catania, J. Interacting epidemics and gay men’s health: a theory of syndemic production among urban gay men. In: Wolitski, R.J.; Stall, R.; Valdiserri, RO., editors. *Unequal opportunity: health disparities affecting gay and bisexual men in the United States.* New York: Oxford University Press; 2008. p. 251-74.
19. Hatzenbuehler ML, Nolen-Hoeksema S, Dovidio J. How does stigma “get under the skin”? The mediating role of emotion regulation. *Psychol Sci.* 2009; 20(10):1282–9. [PubMed: 19765237]
20. Hatzenbuehler ML. How does sexual minority stigma “get under the skin”? A psychological mediation framework. *Psychol Bull.* 2009; 135(5):707–30. [PubMed: 19702379]
21. Stall R, Mills TC, Williamson J, et al. Association of co-occurring psychosocial health problems and increased vulnerability to HIV/AIDS among urban men who have sex with men. *Am J Public Health.* 2003; 93:939–42. [PubMed: 12773359]
22. Mustanski B, Garofalo R, Herrick A, et al. Psychosocial health problems increase risk for HIV urban young men who have sex with men: preliminary evidence of a syndemic in need of attention. *Ann Behav Med.* 2007; 34:37–45. [PubMed: 17688395]
23. Safren SA, O’Cleirigh C, Skeer M, et al. Demonstration and evaluation of a peer-delivered, individually-tailored, HIV prevention intervention for HIV-infected MSM in their primary care setting. *AIDS Behav.* 10.1007/s10461-010-9807-8

24. Sikkema KJ, Hansen NB, Meade CS, et al. Psychosocial predictors of sexual HIV transmission risk behavioral among HIV-positive adults with a sexual abuse history in childhood. *Arch Sex Behav.* 2009; 38:121–34. [PubMed: 17999171]
25. Mimiaga MH, Noonan E, Donnell D, et al. Childhood sexual abuse is highly associated with HIV risk taking behavior and infection among MSM in the EXPLORE Study. *JAIDS.* 2009; 51(3):340–8. [PubMed: 19367173]
26. Meade CS, Kershaw TS, Hansen NB, et al. Long-term correlates of childhood abuse among adults with severe mental illness: adult victimization, substance abuse, and HIV sexual risk behavior. *AIDS Behav.* 2009; 13:207–16. [PubMed: 17968646]
27. Crepaz N, Marks G. Are negative affective states associated with HIV sexual risk behaviors? A meta-analytic review. *Health Psychol.* 2001; 20:291–9. [PubMed: 11515741]
28. Kalichman SC, Weinhardt L. Negative affect and sexual risk behavior: comment on Crepaz and Marks (2001). *Health Psychol.* 2001; 20(4):300–1. [PubMed: 11515742]
29. Koblin BA, Husnik MJ, Colfax G, et al. Risk factors for HIV infection among men who have sex with men. *AIDS.* 2006; 20:731–9. [PubMed: 16514304]
30. Sikkema KJ, Watt MH, Drabkin AS, et al. Mental health treatment to reduce HIV transmission risk behavior: a positive prevention model. *AIDS Behav.* 2010; 14:252–62. [PubMed: 20013043]
31. Barlow, DH. *Clinical handbook of psychological disorders, fourth edition: a step-by-step treatment manual.* New York: Guilford Press; 2007.
32. Resick, PA.; Monson, CM.; Chard, KM. *Cognitive processing therapy: veteran/military version.* Washington: Department of Veterans' Affairs; 2007.
33. O'Cleirigh, C.; Mayer, KH.; Shipherd, JC., et al. Development and pilot study of integrated trauma treatment and sexual risk reduction counseling in sexual risk-taking MSM with a history of childhood sexual abuse. Association of behavioral and cognitive therapy 2010 annual meeting; San Francisco.
34. Mimiaga, MJ.; Reisner, SL.; Pantalone, DW., et al. Successful demonstration of behavioral activation therapy and risk reduction counseling for MSM with crystal methamphetamine abuse at risk for HIV infection. XVIII international AIDS conference; 2010; Vienna.
35. Bandura, A. Social cognitive theory and the exercise of control over HIV infection. In: DiClemente, R.; Peterson, J., editors. *Preventing AIDS: theories and methods of behavioral interventions.* New York: Plenum Press; 1994. p. 25-59.
36. Wulfert E, Wan CK, Backus CA. Gay men's safer sex behavior: an integration of three models. *J Behav Med.* 1996; 19:345–66. [PubMed: 8836826]
37. Wulfert E, Safren SA, Brown I, et al. Cognitive, behavioral, and personality correlates of HIV-positive persons' unsafe sexual behavior. *J Appl Soc Psychol.* 1999; 29:223–44.
38. Safren SA, Traeger L, Skeer MR, et al. Testing a social-cognitive model of HIV transmission risk behaviors in HIV-infected MSM with and without depression. *Health Psychol.* 2010; 29(2):215–21. [PubMed: 20230095]
39. Beck AT. The evolution of the cognitive model of depression and its neurobiological correlates. *Am J Psychiatry.* 2008; 165:969–77. [PubMed: 18628348]
40. Fisher JD, Fisher WA. Changing AIDS-risk behavior. *Psychol Bull.* 1992; 111:455–74. [PubMed: 1594721]
41. Ajzen, I.; Fishbein, M. *Understanding attitudes and predicting social behavior.* Englewood Cliffs: Prentice Hall; 1980.
42. Rosenstock IM, Strecher VJ, Becker MH. Social learning theory and the health belief model. *Health Educ Behav.* 1988; 15(2):175–83.
43. O'Cleirigh C, Safren S. Breaking the mold or business as usual? Meeting the challenges of HIV prevention in people with serious mental illness and substance use disorders. *Clin Psychol Sci Pract.* 2007; 14:34–8.
44. Cohen MS, Gay CL. Treatment to prevent transmission of HIV-1. *Clin Infect Dis.* 2010; 50(S3):S85–95. [PubMed: 20397961]
45. Granich R, Crowley S, Vitoria M, et al. Highly active antiretroviral treatment as prevention of HIV transmission: review of scientific evidence, update. *Curr Opin HIV AIDS.* 2010; 5(4):298–304. [PubMed: 20543604]

46. Safren SA, O’Cleirigh C, Tan J, et al. Randomized controlled trial of cognitive behavioral therapy for adherence and depression (CBT-AD) in HIV-infected individuals. *Health Psychol.* 2009; 28:1–9. [PubMed: 19210012]
47. O’Cleirigh C, Safren S. Optimizing the effects of stress management interventions in HIV. *Health Psychol.* 2008; 27:297–302. [PubMed: 18624592]