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Assessing the Role of Masculinity in the Transmission of HIV: A Systematic Review to Inform HIV Risk Reduction Counseling Interventions for MSM

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Abstract

HIV affects over 1.2 million people in the United States; a substantial number are men who have sex with men (MSM). Despite an abundance of literature evaluating numerous social/structural and individual risk factors associated with HIV for this population, relatively little is known regarding the individual-level role of masculinity in community-level HIV transmission risk. To address this gap, the current analysis systematically reviewed the masculinity and HIV literature for MSM. The findings of 31 sources were included. Seven themes were identified: 1) Number of partners, 2) Attitudes toward condoms, 3) Drug use, 4) Sexual positioning, 5) Condom decision-making, 6) Attitudes toward testing, and 7) Treatment compliance. These factors, representing the enactment of masculine norms, potentiate the spread of HIV. The current article aligns these factors into a Masculinity Model of Community HIV Transmission. Opportunities for counseling interventions include identifying how masculinity informs a client's cognitions, emotions, and behaviors as well as adapting gender transformative interventions to help create new conceptualizations of masculinity for MSM clients. This approach could reduce community-level HIV incidence.

Keywords

Masculinity; HIV; intervention; MSM; transmission; gender-transformative

INTRODUCTION

There are approximately 1.2 million people living with HIV/AIDS (PLWHA) in the United States. There are roughly 50,000 new HIV infections every year. Though constituting less than 5% of the US male population, men who have sex with men (MSM) account for half of PLWHA. Latino and Black MSM have nearly three times and seven times the HIV incidence of White MSM respectively. MSM of all ethnic groups are the only population with significant increases in new HIV diagnoses (Centers for Disease Control and Prevention [CDC], 2010, 2011; Prejean, Song, An, & Hall, 2009; US Department of Health and Human Services [USDHHS], 2013).

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The transmission of HIV between MSM has been the focus of a sizable body of literature. This research has indicated that HIV transmission is a function of two concurrent and interactive influences: 1) Social/Structural Factors and 2) Individual Factors (Poundstone, Strathdee, & Celentano, 2004; Remien & Mellins, 2007). The social/structural factors significantly related to HIV transmission include poverty, political policy, education, social norms, homelessness, stigma, social capital, and racial segregation (Latkin, German, Vlahov, & Galea, 2013; Molina, & Ramirez-Valles, 2013; Poundstone et al., 2004; Zeglin & Stein, 2014). These factors are considered to explain the disproportionate incidence among minority racial groups, as there is evidence that individual-level factors alone do not indicate increased risk among these populations (Friedman, Cooper, & Osborne, 2009; Millett, Flores, Peterson, & Bakeman, 2007). Structural interventions addressing these factors have been propagated in the HIV epidemiology literature. These include housing programs, increased access to health-care, better education, community empowerment, and improved transportation systems (Adimora & Auerbach, 2010; Cohen, 2012; Kegeles, Hays, & Coates, 1996; Prado, Lightfoot, & Brown, 2013).

There has also been a proliferation of theories and models examining HIV risk behavior of individuals (Noar, 2007). These models were informed by research identifying various individual-level risk factors including internalized homonegativity (Ross, Rosser, & Neumaier, 2008), sexual desire (Zea, Reisen, Poppen, & Bianchi, 2009), condom self-efficacy (Newcomb & Mustanski, 2013; Widman, Golin, Grodensky, & Suchindran, 2013), drug use (Mustanski, 2008; Mutchler et al., 2011), perceived social norms (Peterson, Rothenberg, Kraft, Beeker, & Trotter, 2009), sensation seeking (Newcomb, Clerkin, & Mustanski, 2011) and psychosocial stress (Deuba et al., 2013; Safren, Blashill, & O'Cleirigh, 2011). There are currently seven individual-level HIV risk reduction interventions for MSM identified by CDC (2013a) as good or best practices.

The current analysis contends that masculinity is also a mechanism of HIV transmission among MSM at the community-level, one that has been under-researched in the HIV/AIDS epidemiologic literature. Masculinity is a socially constructed concept but is individually enacted (Connell & Messerschmidt, 2005; Mahalik et al., 2003; Scruton, 2001; Shively & de Cecco, 1977, 1993). The construct remains difficult to define, particularly in research, but is generally considered the typical enactment of behaviors, beliefs, values, feelings, and cognitions of male identity (e.g., Hergenrather, Zeglin, Ruda, Hoare, & Rhodes, 2014; Knight et al., 2012; Mahalik et al., 2003; Rothgerber, 2013; Seibert, & Gruenfeld, 1992; Wester & Vogel, 2012; Woodhill & Samuels, 2004). Mahalik (2014) noted that the study of masculinity is "conceptually and methodologically disjointed" (p. 367), thus creating a "sticky" understanding of masculinity (Berggren, 2014).

To ease in the investigation of masculinity, many validated scales have been created to measure this challenging construct. Mahalik et al. (2003), in a series of studies, developed and validated the Conformity to Masculine Norms Inventory (CMNI). The CMNI is a 132-item inventory that assesses an individual's self-rated conformity to 11 psychometrically sound scales (e.g., Power of women, Dominance, Winning, Playboy). Similarly, the Male Role Norms Inventory (MRNI; Levant et al., 2007) assesses one's level of masculine ideology, using 57 items, along eight scales (e.g., Hatred of homosexuals; Non-relational

attitudes towards sexuality, Restrictive emotionality). Some scales have also been developed to assess an individual's gender role strain (i.e., the distress resulting from challenges in meeting masculine ideals and/or in experiencing negative outcomes because of meeting them). The Gender Role Conflict Scale (GRCS), for example, was developed by O'Neil, Helms, Gable, David, and Wrightsman (1986). This 37-item assessment measures the degree to which an individual reports negative consequences of navigating rigid gender norms. All of these scales share a common theme; they call attention to a need for a clearer understanding of masculine norms.

Hegemonic masculinity is broadly described as the configuration of dominant masculine norms that marginalize and subordinate women and other men (Connell, 1995; Connell & Messerschmidt, 2005). Discussion of hegemonic masculinity typically includes traits such as ambition, risk-taking, strength, success, heterosexuality, sexual adventurism, leadership, muscular physical features, and stoicism. Few men are able to achieve this idealized form of masculinity, resulting in gender role strain. To compensate, some men enact hypermasculinity (i.e., engaging in amplified masculine norms including sexual promiscuity, body-building, and denying weakness or pain; Connell, 1995; Connell & Messerschmidt, 2005; Eguchi, 2009; Reeser, 2010). This can have very real health consequences for men. For example, there are strong associations between masculinity and reduced help-seeking behaviors (Galdas, Cheater, & Marshall, 2005; O'Brien, Hunt, & Hart, 2005). As Courtenay (2000) succinctly states, "To carry out any one positive health behaviour, a man may need to reject multiple constructions of masculinity" (p. 1389). Aligning with this, research has shown that men who are more conforming to masculine norms are significantly less likely to engage in positive health behaviors (Mahalik, Burns, & Syzdek, 2007) and are significantly more likely to endorse mental health symptoms (Mahalik et al., 2003). This relationship between masculinity and health behavior highlights the possible significance of investigating the role of masculinity in HIV-related health behaviors (e.g., condom use, testing, medication adherence).

Some subordinated masculinities, including that of MSM, cannot ipso facto achieve hegemonic masculinity, therefore creating significant gender role strain and even further supporting the enactment of hypermasculinity (Eguchi, 2009; Fields et al., 2015). Further, masculine norms are influenced by the intersecting identities of race, sexual orientation, and masculinity. Racial/ethnic minority men face sociopolitical challenges to obtaining many hegemonic masculine norms (e.g., education, employment). This can result in significant gender role strain, motivating these men to, in turn, demonstrate masculine identity through other means (e.g., physical toughness or sexual prowess). For racial/ethnic minority MSM, these alternatives still do not alter sexual orientation, heterosexuality being a staple of hegemonic masculinity. This is thought to be responsible for the "down low" phenomenon in the black MSM community (Bowleg, 2013; Bowleg et al., 2011; Fields et al., 2012, 2015; Ford, Whetten, Hall, Kaufman, & Thrasher, 2006; Malebranche, 2003, 2008; Malebranche et al., 2009; Saez, Casado, & Wade, 2009). Non-heterosexuality remains an immutable barrier to hegemonic masculinity.

Though achieving hegemonic masculinity may be impossible, hegemonic masculine norms remain the only guidepost by which MSM can assess their behaviors and practices (Connell

& Messerschmidt, 2005; Demetriou, 2001; Fields et al., 2015), making masculinity a viable target of inquiry to better understand MSM's behaviors. For example, the influence of hegemonic masculinity plays a part in shaping the gay male body. The idealization of muscularity, size, and stamina within gay masculinities is a reification of hegemonic masculinity through hypermasculinity (Demetriou, 2001; Reeser, 2010). In fact, as Hennen (2005) suggests, this fit muscular physique can serve to subjugate the feminizing features of other body shapes within the gay community, affecting an intra-community hegemony. Halkitis (2001) and Halkitis, Green, and Wilton (2004) found that, for MSM living with HIV, maintaining a strong physical presence was a salient concern and noted that this was connected to an overall sense of virility. Tate and George (2001) revealed a poignant relationship between HIV and body image among MSM, with many participants feeling that HIV undermined their control of their body and negatively affected their social presence, challenging their ability to enact idealized physical masculinity.

Some researchers have used the link between HIV and masculinity to explore how the latter may be a risk factor for HIV/AIDS. Men may be vulnerable to HIV infection because of their conceptualization of and attempts at enacting masculinity (Barker & Ricardo, 2005; Gupta, 2000; Morrell, 2003). Enacting hegemonic masculine norms puts men at risk for HIV via reluctance to get tested, having multiple sexual partners, and having risky sexual encounters, highlighting a relevant place for men and their masculinity as agents of HIV prevention (Dworkin, Fullilove, & Peacock, 2009; Dworkin, Treves-Kagan, & Lippman, 2013; Higgins, Hoffman, & Dworkin, 2010; Verma et al., 2006). Malebranche, Gvetadze, Millett, and Sutton (2012) found that greater gender role strain among men was associated with an increased likelihood of unprotected sex with their female partners. Additionally, Bowleg et al. (2011) found, among a sample of black men, that the expectations surrounding masculinity do not permit them to ever decline sex. The bulk of this work has been done with heterosexual males and often outside of the United States. The only CDC (2013a) good or best practice to explicitly mention masculinity as a component of its intervention strategy, HoMBREeS (Rhodes, Hergenrather, Bloom, Leichter, & Montano, 2009), is targeted for heterosexual Latino males.

Though much of the literature investigating masculinity and HIV/AIDS risk has been done with heterosexual men, there is increasing awareness of this dynamic in the lives of MSM. Work being done by Fields and colleagues (2012; 2015), Malebranche (2008), and Malebranche et al. (2009) has consistently identified a significant relationship between the navigation of masculinity and HIV/AIDS risk. Their work has shown that, among black MSM, enactments of culturally accepted masculine norms is linked to increased HIV risk behavior including unprotected sex, partner concurrency, and negative attitudes toward gay communities and resources. In fact, Fields et al. (2012) found that participants reported using perceived masculinity to assess HIV status in partners.

Fields et al. (2015), perhaps in particular, demonstrated that black MSM accredited some of their HIV risk behavior to the effects of gender role strain. This supports the notion that the psychological processes and consequences of navigating masculinity can influence HIV risk behavior. Although most of the seven CDC (2013a) individual-level HIV risk reduction interventions for MSM are to be delivered in counseling, none directly address the construct

of masculinity. The present analysis contends that, since masculinity is individually enacted, it is a viable target for counseling interventions which can then have an impact on reducing community-level HIV transmissions.

Fields et al. (2012; 2015) and Mays, Cochran, and Zamudio (2004) called for the inclusion of masculinity in HIV prevention strategies for MSM. The current analysis seeks to begin to answer this call by first establishing a model from which to conceptualize the role of masculinity in the spread of HIV at the community level, inspired by the aforementioned work being done with MSM at the individual level. By doing so, masculinity may be revealed as a bridge between the individual-level and social/structural-level factors discussed in Poundstone et al. (2007), and masculinity-focused counseling interventions may be one vehicle to cross that bridge. Counseling professionals (e.g., therapists, social workers, nurses) work with at-risk MSM before and after HIV seroconversion (i.e., becoming infected with HIV). By better understanding the role of masculinity in HIV transmission, they can begin to offer more holistic and culturally sensitive HIV risk reduction interventions. Halkitis et al. (2004) noted that it is important to understand how the navigation of masculinity for MSM has “an impact on the decisions these men make and the behaviors in which these men engage” (p. 40). To this end, the objective of this article is to support this understanding by: 1) presenting a review of relevant sources; 2) synthesizing the information into a masculinity model of community HIV transmission; and 3) identifying opportunities for masculinity-based counseling interventions with MSM.

METHOD

Theoretical Framework

Masculinity was the variable being explored. Because masculinity remains relatively undefined, and considering its inconsistent appearance in community-level HIV infection literature among MSM, the present analysis utilized a post-positivist methodological epistemology to conceptualize masculinity (Creswell 2007, 2013; Hergenrather et al., 2014; Martin, 1998; Spence & Buckner, 1995). This approach asserts that, although masculinity maintains a true quality, it can only be ascertained by examining its smaller, less accurate, and more imperfect parts. This creates a methodological pluralism wherein the variable of interest is allowed to vary across included sources. This may be particularly important when investigating constructs that are still ill-defined, in flux, or for those whose definitions are still contested (Creswell, 2007, 2013; Mahalik, 2014). Masculinity among MSM, as discussed above, was felt to be reliably within this category. As such, the current analysis did not hold the definition of masculinity constant across sources, allowing the articles instead to present the largest possible picture of masculinity's role in community HIV transmission. Operationally, this means that sources were included regardless of their definition of masculinity (e.g., masculine norms, masculine ideology, gender role) or of their measure of masculinity.

Review Process

The literature review included a keyword search of online databases. The databases used were Google Scholar, ProQuest, PsychINFO, PubMed, and ScienceDirect and were searched

from their inception through 2013. The keywords included: masculinity, masculine norms, HIV, MSM, men who have sex with men, gay men, homosexual, risk factors, and protective factors. Inclusion criteria were: 1) available in English 2) peer-reviewed articles; 3) books or book chapters; and 4) having sufficient discussion of results or themes for proper data abstraction.

The initial search yielded over 1,500 sources. Titles and abstracts not fitting within the scope of the review were immediately omitted, leaving 53 sources for review. Of these, 31 did not meet inclusion criteria and were removed, leaving 22 sources. A bibliography review yielded nine additional sources. Ultimately, the literature search identified 31 sources examining the relationship between masculinity and HIV transmission for MSM.

The author utilized a four-step review process to identify the salient themes in the literature. First, data from each source were abstracted using an instrument to document key features of each source. These included independent variable(s), dependent variable(s), and (depending on the type of source) statistically significant results, qualitatively identified themes, and/or applicable discussions with adequate research support. Then, the author reviewed the data abstraction instrument to qualitatively categorize the sources' findings. Seven salient themes were identified. The author then, in the third step, used the list of seven themes to crosscheck all findings in the data abstraction instrument. Finally, an independent reviewer who is a professional in the field of HIV prevention assessed the final list of seven themes and considered them face valid with respect to masculinity and community HIV transmission risk.

RESULTS

Seven themes were identified: 1) number of partners, 2) attitudes toward condoms, 3) drug use, 4) sexual positioning, 5) condom decision-making, 6) attitudes toward testing, and 7) treatment compliance. Each theme is significantly associated with increased risk for community-level HIV transmission and is therefore considered a risk factor. The present analysis identified zero community-level protective factors associated with masculinity in the literature, though occasional non-significant findings were reported and are included where appropriate.

Pre-Exposure

Pre-exposure factors are conceptualized as those that are present before and/or that facilitate seroconversion. These factors are further divided into two sub-groups. General risk factors are those that potentiate risky sexual encounters and include a) number of partners; b) attitudes toward condoms; and c) drug use. Intradyadic risk factors are those that are salient in the course of a particular sexual encounter and include a) condom decision-making; and b) sexual positioning. The distinction between general and intradyadic factors is highlighted in Zea et al., (2009).

Number of partners—Demonstrations of sexual prowess through high partner concurrency has been identified as a masculine behavior (Halkitis et al., 2004; Malebranche et al., 2009; Sánchez, Greenberg, Liu, & Vilain, 2009). Halkitis (2001) notes that

masculinity for MSM is “often associated with both the frequency of the sexual behaviors as well as the adventurism associated with sexual encounters” (p. 420). Parent, Torrey, & Michaels (2012) found that, among 170 MSM, number of sexual partners was positively correlated to masculinity. In a longitudinal study of over 4,000 MSM, Koblin et al. (2006) reported that high numbers of sexual partners was positively associated with HIV infection. CDC (2013b), The National AIDS Trust (NAT; 2010), and USDHHS (2013) identify multiple partners and partner concurrency as an HIV risk factor.

Attitudes toward condoms—Shernoff (2006) and Halkitis (2001) detail the dynamic influences on MSM’s negative attitudes toward condom use, citing masculinity as a possible factor. In a detailed literature review, Berg (2009) presented masculinity as a factor associated with identifying as a “barebacker” (i.e., not using condoms during sex). This has been consistently demonstrated, as MSM report that not using condoms is more masculine (Dowsett, Williams, Ventuneac, & Carballo-Diéguez, 2008; Halkitis & Parsons, 2003; Halkitis, Parsons, & Wilton, 2003; Ridge, 2004). Hamilton & Mahalik (2009) found that masculinity was correlated to frequency of unprotected sex and to the belief that unprotected sex was normative. Notably, Malebranche et al. (2009) did not find this association in their sample of MSM. Unprotected anal sex is a substantial risk factor for HIV (CDC, 2013b; Koblin et al., 2006; NAT, 2010; USDHHS, 2013).

Drug use—Masculinity has been associated with drug use in the MSM community (Halkitis, 1999). Shernoff (2006) discussed drugs’ role in gay culture, highlighting the connection between substance use and sex. Halkitis et al. (2008b) reported a similar theme, finding that MSM who reported higher rates of drug use were more likely to conceptualize masculinity in sexual terms. The study also found that nearly 25% of the MSM they sampled reported methamphetamine (meth) use. Masculinity is also associated with steroid and alcohol use among MSM (Halkitis, Moeller, & DeRaleau, 2008a; Hamilton & Mahalik, 2009). MSM who self-identified as “barebackers” (an identity associated with masculinity) were more likely to report both injection and non-injection drug use (Halkitis et al., 2005). However, Hamilton & Mahalik (2009) did not find a correlation between masculinity and drug use. Koblin et al. (2006) found that 29% of HIV infections in their sample were attributable to alcohol or drug use prior to sex.

Sexual positioning—Literature indicated that masculinity was also related to sexual positioning within a dyad (i.e., whether the person is insertive [top] or receptive [bottom]; Carballo-Diéguez et al., 2004; Fields et al., 2012; Jarama, Kennamer, Poppen, Hendricks, & Bradford, 2005; Johns, Pingel, Eisenberg, Santana, & Bauermeister, 2012; Malebranche et al., 2009). In a sample of 1,065 MSM, men with above average penises (a social proxy for masculinity) were more likely to identify as tops (Grov, Parsons, & Bimbi, 2010). Moskowitz and Hart (2011), in their sample of 429 MSM, found that masculinity and penis size were significant predictors of sexual position. Zheng, Hart, and Zheng, (2012) found that, among 220 MSM, self-identified tops had significantly higher masculinity scores than self-identified bottoms and men identifying as versatile. Conversely, some interviews presented in Ridge (2004), suggest that positioning as a bottom is perceived as the more masculine role. Zheng, Hart, and Zheng, (2013) found that self-identified tops preferred men

with feminine facial features, particularly if the participant was less restricted in their sociosexual orientation (i.e., accepting brief sexual relationships). Similarly, they found that self-identified bottoms preferred men with masculine facial features, particularly for less sociosexually restricted participants. MSM identifying as bottoms are over twice as likely as others to be HIV-positive (Wei & Raymond, 2011).

Condom decision-making—Within a dyad, there is reference to the more masculine partner making the condom-use decision (Fields et al., 2012). The decision-making power is deferred in this way because masculine partners are considered safe partners (Fields et al., 2012; Kippax & Smith, 2001; Malebranche et al., 2009; Shernoff, 2006). This dynamic is confounded by the fact that penis size is positively correlated to difficulty finding appropriately fitting condoms, frequency of condom breakage and slippage, and contraction of sexually transmitted infections (STIs; Grov et al., 2010; Gov, Wells, & Parsons, 2013). Nearly 20% of MSM report condom malfunction, increasing STI risk (CDC, 2013b; D’Anna et al., 2012; USDHHS, 2013).

Post-Exposure

Post-exposure factors are conceptualized as those present after potential seroconversion. These risk factors include a) attitudes toward testing and b) treatment compliance. Both of these factors are general risk factors; no post-exposure intradyadic factors were identified.

Attitudes toward testing—Masculinity has been associated with a reluctance to seek help. Parent et al. (2012), in their article titled “‘HIV Testing is so Gay’,” noted that the masculine norm of preserving a heterosexual presentation predicted lower HIV testing. This is congruent with research indicating that a common barrier to testing is perceived homophobia (Santos et al., 2013; Scott et al., 2013; Sullivan et al., 2012). Infrequent testing is a considerable risk factor for the transmission of HIV (CDC, 2013b; NAT, 2010; USDHHS, 2013). Literature suggests that men who receive testing and are HIV-positive are less likely to have unprotected anal intercourse with HIV-negative or HIV-unknown men (Poppen, Reisen, Zea, Bianchi, & Echeverry, 2005; Zablotska et al., 2009).

Treatment compliance—There is an association between masculinity and medication non-adherence among HIV+ men (Nieves-Lugo & Toro-Alfonso, 2012). Blashill and Vander Wal (2010) noted that the pressure to appear in shape and to project physical masculinity could facilitate HAART non-compliance. Galvan, Bogart, Wagner, and Klein (2012) found that, among 208 HIV+ Latino MSM, men endorsing traditional machismo (i.e., a cultural conceptualization of masculinity) were half as likely as others to report 100% adherence to medication. The side effects of HIV medication can reduce libido, virility, and erectile tumescence; these are perceived threats to masculinity and could be barriers to adherence (Halkitis, 2001). Non-adherence to antiretroviral medication increases viral load, leading to higher infectivity (CDC, 2013b; USDHHS, 2013; Dieffenbach & Fauci, 2009; Kalichman et al., 2011).

DISCUSSION

Masculinity Model of Community HIV Transmission

The present review suggests that, taken together, the identified factors produce a Masculinity Model of Community HIV Transmission (MMCHT). This model (see Figure 1) demonstrates how masculinity can be one factor responsible for the rapid proliferation of HIV within the MSM community. The seven risk factors culminate in three intermediary risk scenarios; the confluence of these ultimately leads to multiple community HIV transmissions.

Low condom use—Figure one demonstrates how three of the MMCHT risk factors may lead to low condom use. The model suggests that men who enact these masculine norms not only have poor attitudes toward condoms but are also the ones ultimately making the decision whether condoms will be used during a particular sexual encounter. Individuals with negative attitudes toward a behavior that they also feel in control of are unlikely to engage in that behavior (Ajzen, 2012; Conner & McMillan, 1999). Moreover, the MMCHT notes that this decision-making process may be clouded by drug use prior to the sexual encounter. The confluence of these factors is a decreased chance that condoms will be used during a particular sexual encounter, qualifying such an encounter as a risk for possible transmission.

Multiple risky encounters—The MMCHT also notes the influence of the masculine norm of multiple partners and partner concurrency. As such, the risk of community-level transmission is a function of the risk present within a single risky encounter (see above) being multiplied several times over by having multiple partners and partner concurrency. As the number of sexual partners increases, the number of possible community transmissions increases correspondingly.

Increased infectivity—Finally, the model outlines how masculine attitudes toward testing, treatment, and sexual positioning increase the infectivity of a male who conforms to these normative attitudes. Even within an unprotected sexual encounter, the risk of transmission is relatively low if the infected partner has been tested, is adherent to treatment, and is the receptive partner (Beyrer et al., 2012; Granich, Gilks, Dye, De Cock, & Williams, 2009). Otherwise, infectivity is high. If this increased infectivity is present across the multiple risky encounters mentioned above, there is a significant risk of multiple rapid community-level HIV transmissions.

Individual Risk vs. Community Risk

It is important to note that some of the aforementioned factors may be protective for an individual while also increasing the risk of community-level transmission, aligning with the MMCHT. For example, sexual position as a top is protective for an individual within a particular sexual dyad. However, if a top rather than a bottom is HIV+ there is a heightened community-level risk of transmission due to the increased infectivity of the insertive partner to the receptive partner. As discussed above and as displayed in Figure 1, this infectivity is amplified by several other masculine norms that may also be expressed by the individual

(e.g., multiple partners). For this reason, the seven identified risk factors are contributors to the MMCHT, regardless of their status as protective factors for an individual. The Masculinity Model of Community HIV Transmission indicates that masculinity is an important component to consider, among many others, within the social epidemiology of HIV.

Implications for Counseling Interventions

The treatment triangle, often utilized by counseling professionals, represents the interaction between an individual's cognitions, emotions, and behaviors (Izard, Kagan, & Zajonc, 1985; Walen, DiGiuseppe, & Dryden, 1992). Theories of psychotherapy and counseling target at least one of these components in their conceptualization of distress and/or in their planning of interventions. Hergenrather et al. (2014) noted that the qualities traditionally associated with masculinity could be organized within the components of the treatment triangle. Counseling professionals, guided by CDC (2013a) good and best practices for HIV risk reduction, can begin to assess how a client conceptualizes masculinity within their culture and how this conceptualization informs each of these three components of the treatment triangle, paying particular attention to the seven themes from the Masculinity Model of Community HIV Transmission. This could include the use of standardized assessments (Mahalik, Talmadge, Locke, & Scott, 2005). Psychotherapy and counseling theories and interventions that are sensitive to the role of masculinity for the client and the client's culture can then be selected and implemented (Addis & Cohane, 2005; Liu, 2005). Considering that masculinity is often a salient issue for MSM, this approach leads to more culturally competent and productive treatment (Dunn, 2012; Halkitis, 2001; Sánchez & Vilain, 2012; Sánchez, Westefeld, Liu, & Vilain, 2010). Because of the aforementioned myriad ways in which masculinity influences community HIV transmission risk, interventions targeting masculinity can have dynamic and widespread ameliorative effects.

Additionally, interventions that transform negative components of masculinity by highlighting the positive components could mitigate the catalytic influence of masculinity on community HIV transmission among MSM. Men who are presented with information demonstrating that traditional conceptualizations of masculinity may be harmful and who are provided support and safety in exploring alternative conceptualizations of masculinity are likely to reevaluate and alter their beliefs and behaviors relating to masculinity (Barker & Ricardo, 2005; Lynch, Brouard, & Visser, 2010). Gupta (2000) noted that these interventions conceptualize masculinity as a set of changeable social norms, seeking to create new behaviors that facilitate healthier lifestyles. These are described as gender-transformative interventions (Barker, Ricardo, Nascimento, Olukoya, & Santos, 2010; Dunkle & Jewkes, 2007; Dworkin et al., 2009; Gupta, 2000) and have been shown to have positive health-related results among heterosexual men, including reducing HIV risk behavior. Dworkin et al. (2013), in a review of literature from across the globe, detailed 15 gender-transformative interventions. They found that, in general, these interventions reduce sexual risk behaviors including unprotected sex, purchasing of sex, and concurrent partners.

For example, 'Stepping Stones' is a program encouraging discussions on the role of gender in community leadership, death, substance use, love and intimacy, sex, violence, and more

(Welbourn, 2009). A systematic review of ‘Stepping Stone’ literature (Skevington, Sovetkina, & Gillison, 2013) found that the program increased HIV testing, increased condom use, reduced multiple partnering, and reduced substance abuse. Similar programs in Nicaragua, supported by USAID, report success reducing HIV transmission by highlighting prosocial self-esteem and self-care qualities of masculinity (Tallada, 2011). Farrimond (2012) noted that men who created a positive-focused model of masculinity perceived themselves as active and responsible participants in their healthcare. These men were more likely to seek medical help, going against traditional masculine norms. Additionally, Galvan et al. (2012), found that “caballerismo,” a culture-specific conceptualization of masculinity that stresses collaboration, family values, and respect, was significantly correlated to an increased likelihood of reporting 100% compliance with HIV medication. Many of these gender-transformative interventions were designed for heterosexual men in countries outside of the United States; the present analysis calls attention to the need for exploration of their effectiveness with MSM in the US as well.

Future Research

Although the current analysis identified several factors directly linking masculinity to HIV risk behavior, there are still opportunities for research to better clarify this relationship. Future inquiry can begin to uncover the ways in which masculinity is a component of other behaviors of interest, ones that may be less direct HIV risk factors. For example, masculinity has been included in research regarding disclosure of sexual orientation, HIV-status disclosure, community formation, and partner selection among MSM (Bianchi et al., 2010; Clark et al., 2013; García, Lechuga, & Zea, 2012; Knox, Reddy, Kaighobadi, Nel, & Sandfort, 2013). Though these studies offer inconsistent findings, they indicate a continued need to evaluate the role of masculinity in these and other constructs.

Similarly, as this analysis was a systematic literature review and not a meta-analysis, all sources were given equal weight in the discussion of their findings regardless of their limitations. Future studies should consider approaching the question of masculine ideology and community HIV transmission using a meta-analytic methodology. This may prove difficult at this juncture however, as there is still a paucity of quantitative studies investigating this issue with standardized and validated measures within the MSM population. Still, as more studies are conducted in this arena, there will be an opportunity to assess the true impact of masculine ideology on community HIV transmission, an impact that the current analysis suggests may not be insignificant.

Additionally, though the aforementioned gender-transformative approach to masculinity provides a proven foundation from which to start, it has not yet been widely applied to MSM populations. Its inclusion in the present article is a call for future examination of the theory’s applicability to this population. The efficacy and effectiveness of gender-transformative interventions for MSM should first begin with a rigorous evaluation of and possible revision to existing intervention curricula. Furthermore, it will be important to supplement these curricula with information that is particularly appropriate for masculinity-related topics within the MSM community. This should include participation by and input from MSM. Community-Based Participatory Research (CBPR) is a possible first step in this endeavor,

prioritizing the role of MSM community members in the research process, data analysis, and dissemination of results (Rhodes, Malow, & Jolly, 2010). A CBPR approach also facilitates the creation of interventions that are sensitive to the intersections of race and class with masculinity (Hill, & McNeely, 2013; Rhodes, 2014; Rhodes et al., 2011). This line of inquiry can lead the way to evidence-based masculinity-focused interventions for MSM.

There is a sizable body of literature identifying the influential role of medical professionals in the lives of MSM (Hays, Turner, & Coates, 1992; Hergenrather, Rhodes, & Clark, 2005; Preau, 2004). Taylor and Robertson (1994) called for the nurses to become more familiar with the health care needs of MSM. Future research is needed to assess how medical professionals, particularly perhaps nurses, could employ the Masculinity Model of Community HIV Transmission during the course of their contact with patients. Doing so can lead to a collaborative interdisciplinary approach to reducing HIV transmission within a community.

Limitations

Evaluation of the concepts presented in this paper must be reviewed with due consideration of its limitations. First, based solely on a literature review, the model presented in Figure 1 requires quantitative validation, possibly through meta-analysis as mentioned above. This represents a necessary area of future study, particularly if subsequent interventions are to be explored. A second limitation is the measurement of masculinity. There is a paucity of studies validating common masculinity measures with MSM populations. As such, the conclusions drawn in the present article may be approximations. This is additionally confounded by the aggregation of masculinity across cultures. Masculinity and masculine norms can be expressed radically differently between, for example, racially diverse populations (Fields et al., 2012, 2015; Galvan et al., 2012; Hergenrather et al., 2014). Finally, this review is subject to the same publication bias inherent in any literature review. Though future empirical work can address these limitations, the present analysis achieved its objectives.

CONCLUSION

Masculinity is associated with seven risk factors for HIV transmission. These ultimately produce a complex masculinity model of community HIV transmission. From a social-epidemiologic perspective, masculinity seems to play an integral role in the spread of HIV within a community of MSM. Counseling professionals ought to explore masculinity with their clients, highlighting positive and prosocial components thereof. There is a clear need for developing interventions targeting masculinity among the MSM community, creating new prosocial conceptualizations of masculinity. This can empower MSM to enact masculinity in healthier ways, reducing HIV transmission risk. Positive results of such interventions could be advantageous for individual MSM and for the MSM community.

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Figure 1. Masculinity Model of Community HIV Transmission. This figure outlines the process by which the enactment of masculine norms can facilitate rapid community-level HIV transmission.