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South African Men Who Have Sex with Both Men and Women and How They Differ from Men Who Have Sex with Men Exclusively

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Abstract

The label "men who have sex with men" (MSM) is used to categorize a diverse population exclusively on the basis of their sexual behavior. Understanding the diversity that this label comprises is critical for the development of health interventions that effectively reach the various populations subsumed under this label. In this cross-sectional study, South African MSM (N = 480), recruited through respondent-driven sampling (RDS), we explored differences between men who had sex with both men and women (MSMW) and men who exclusively had sex with men (MSME). We found significant differences between these two groups in terms of sexual attraction, sexual identity, sexual preferences, sexual histories, and current sexual practices. MSMW were more likely to be confused about their same-sex attraction, to experience internalized homophobia, and to have paid for sex in the previous year, while MSME were more gender nonconforming and more likely to have been forced to have sex in the previous year. These findings underscore that the MSM label compromises a diverse population and that exclusive sexual engagement with other men is a critical distinction to take into account in understanding this diversity and fully grasping the lived experiences of men who have sex with men.

Keywords: Men who have sex with men, men who have sex with men and women, South Africa

With 18% of all people living with HIV/AIDS, the global burden of HIV and AIDS disproportionately affects the population of sub-Saharan Africa (UNAIDS, 2014). Sexual behaviors among heterosexual partners are widely considered to be the driving force in the transmission of HIV in this region. For a long time, little attention has been paid to transmission of HIV among men, both in research and prevention (Reddy, Sandfort, & Rispel, 2009). The

stigmatization and criminalization of same-sex experiences have likely contributed to this neglect (Poteat et al., 2011; Sanders et al., 2007).

Research has now convincingly shown that men who have sex with men (MSM) in Africa are disproportionately affected by HIV, compared to men who do not have sex with men (Rispel, Metcalf, Cloete, Reddy, & Lombard, 2011; Sanders et al., 2013; Sandfort, Bos, Knox & Reddy, 2015; Sheehy et al., 2014; Wade et al., 2005). It is estimated that MSM in Africa are 3.8 times more likely to be infected with HIV compared to other men (Beyrer et al., 2012).

Ongoing research among African MSM has also started to produce a better understanding of the social and sexual experiences of this population, and their impact on the men's sexual and mental health. For instance, South African MSM have been found to experience high levels of internalized homophobia and men who experienced high levels of internalized homophobia were more likely to be misinformed about HIV (Vu, Tun, Sheehy, & Nel, 2012). Additionally, MSM who experienced high levels of violence also experienced higher levels of internalized homophobia, had on average more sexual partners, experienced more depression, and were more likely to be HIV infected (Anderson, Ross, Nyoni, & McCurdy, 2014).

A recurrent finding in HIV-related research among MSM in Africa are the relatively large proportions of MSM who also have sex with women, not only on a lifetime basis, but also regarding more recent time periods (Lamarange, Desgrées du Loû, Enel, & Wade, 2009; Sanders et al., 2010; Sandfort, Lane, Dolezal, & Reddy, 2015; Wagenaar, Sullivan, & Stephenson, 2012). MSM who also have sex with women seemed likely to believe that it is safer to have sex with men than with women, which has implications for condom use and transmission of HIV and other STDs (Lockhart, 2002; Lorway, 2006; Musinguzi et al., 2015; Taegtmeyer et al., 2013). There also seem to be differences in sexual behaviors, sexual risk, and sexual identities between

men who have sex exclusively with men (MSME) and men who have sex with both men and women (MSMW). For instance, African MSME have been found to have higher rates of HIV than MSMW (Sanders et al., 2007; Sandfort et al., 2015; Sheehy et al., 2014). MSME are also more likely than MSMW to engage in receptive anal sex (Lamarange et al., 2009; Sanders et al., 2013) and to ever have been forced to have sex (Sanders et al., 2007). In contrast, African MSMW have been found to be more likely than MSME to identify as bisexual (Sheehy et al., 2014), engage in insertive anal sex (Lamarange et al., 2009; Sanders et al., 2013; Sheehy et al., 2014), and be married, separated or widowed (Sanders et al., 2007).

Current research findings suggest that whether or not MSM also engage in sex with women is an important distinction that can help understand the diversity comprised by the epidemiological category of MSM (Parker, Aggleton, & Perez-Brumer, 2016). This study aims to build upon existing research and further explored differences between MSMW and MSME, based on research conducted in South Africa. Understanding of differences between these two groups might critically contribute to our comprehension of human sexuality. Findings will also have consequences for HIV prevention programming, because they will allow tailoring of such efforts. The overall question that this study addressed is how South African MSMW differ from MSME in terms of their sexual experiences and the way they express their sexuality.

Method

Participants

A total of 480 MSM (213 MSMW, 267 MSME) were recruited in the Gauteng Province of South Africa. Eligibility criteria included: (1) male sex assigned at birth; (2) being over 18 years of age; (3) spending a considerable amount of time in the Tshwane metropolitan area; (4) proficiency in English, isiZulu, or Sepedi (Northern Sotho); (5) having engaged in masturbatory,

oral, or anal sex with a man within the previous 12 months; and (6) willingness to take a rapid HIV test. Participants' mean age was 24.5 years *(SD* = 5.29*)*, with MSMW participants (*M* = 25.1, *SD* = 5.40) being older than MSME participants *(M* = 24.0, *SD* = 5.16*).*

Procedure

We conducted a cross-sectional study among 480 MSM, recruited through respondent-driven sampling (RDS) using 20 seeds. These seeds, all of Black ethnicity, were purposively selected, taking into account sexual orientation, gender identity, geographic residence, age, and having a large social networks and the ability to recruit other men. Seeds were identified in formative work through the involvement of key informants (see Sandfort et al., 2015). Upon completing the study procedures, each seed was given three to five coupons to distribute to men "like them" in their social networks. The same procedure was followed with study participants who were referred to the study by the seeds. The coupons had identification numbers that were used to link participants. As an incentive for participation, each participant was given a voucher to be redeemed at a local supermarket. Recruitment of further participants was also incentivized. Participants were recruited in 18 waves between August 2011 and January 2013.

Data were collected through 90-minute interviewer-administered computer-assisted personal interviews. Interviews took place at a safe and confidential location at the participants' discretion; interview locations included the offices of the Human Sciences Research Council in the Center of Pretoria and community health centers within the Tshwane metropolitan area.

Measures

The questionnaire captured demographic information (i.e., age, education, income, etc.), sexual attraction and sexual and gender identity, sexual preferences (i.e., pleasure associated with

different sexual acts), sexual history, sexual experiences (i.e., sex with men, sex with women), and sexual risk behavior.

To assess gender and sexual identity-related concepts, we used identical or similar scales that have been used successfully in this population (e.g., Knox, Sandfort, Yi, Reddy, & Maimane, 2011; Sandfort, Nel, Rich, Reddy, & Yi, 2008; Vu, Tun, Sheehy, & Nel, 2012). Sexual attraction was measured by asking participants "Do you currently feel more sexually attracted to men or to women?" with a 5-category response scale (i.e., 1 = "Only to women"; 5 = "Only to men"). Sexual identity was assessed by asking, "What word would you use to describe your sexuality? Would you call yourself gay, bisexual, or straight, or would you use another word?" Gender nonconformity was measured using a 6-item scale (i.e., "In general, how feminine do you think you are?") with a 5-category response scale (1 = "Not at all"; 5 = "Extremely"). Cronbach alpha was 0.95.

Subscales adapted from the Lesbian, Gay, Bisexual Identity Scale (LGBIS; Mohr & Fassinger, 2000; Mohr & Fassinger, 2006) were used to examine sexual identity confusion and internalized homophobia. Sexual identity confusion was measured using a 4-item scale (i.e., "I get very confused when I try to figure out my sexual orientation") and internalized homophobia was assessed with a 7-item scale (i.e., "Sometimes I dislike myself for being a man who has sex with men"). Both scales used a 4-category response scale (1 = "Strongly disagree"; 4 = "Strongly agree"). The Cronbach alpha in this study was 0.89 and 0.85, respectively. Secretiveness about one's sexual attraction to men was assessed using an 8-item scale derived from Day and Schoenrade (1997; i.e., "In general, how hard do you try to keep your sexual orientation hidden from your family?"); the Cronbach alpha was 0.96.

Sexual preferences were assessed by evaluating the degree of pleasure associated with various sexual acts (i.e., "Receiving oral sex from a man, that is when a man sucks your penis") with 5-item response scales (i.e., 1 = "very pleasurable"; 5 = "very unpleasurable"). One's future relationship orientation was assessed using the question "If you look to the future, what would you prefer most: to be single, to be in a relationship with a man, or to be in a relationship with a woman?" with three answer categories ("To be single," "To be in long-term relationship with a man, whether we marry or not," and "To be in long-term relationship with a woman, whether we marry or not").

Sexual history was assessed by examining the lifetime number of male and female sexual partners and participation in risky sexual behaviors, such as transactional sex, as well as forced sex. Sexual experiences were assessed by examining whether or not men had engaged in certain sexual behaviors throughout their lifetime (i.e., "Anal intercourse with a woman," "Receptive anal sex," etc.). Frequency of sexual behaviors were assessed by asking the participants how many times they had engaged in particular sexual behaviors in the previous year (i.e., "Vaginal sex with woman," "Receptive anal sex with man," etc.). Sexual risk behavior was assessed by asking participants about condomless anal sex with men, separate for receptive and insertive roles, and about condomless vaginal or anal intercourse with women.

Analytical approach. All data were weighted using an RDS II estimator (Abdul-Quader et al., 2006; Volz & Heckathorn, 2008) during analysis. This was done to give greater weight to MSM who had considerably smaller social networks or personal network size (PNS), because these participants would likely have a lower probability of being recruited into this study. To calculate the weights, the inverse of PNS was calculated, multiplied by the sample size (N) and then divided by the sum of weights ($\sum w$). The equation was as follows: $[(1/PNS) \times (N/\sum w)]$. The

Ns produced in different analyses varied slightly due to this adjustment; hence, they may not always have totals of 480.

We explored differences between MSMW and MSME based on both lifetime sexual behavior (i.e., men who had only had sex with men ever in their lifetime versus men who ever in their lifetime also had sex with women) and sexual behavior in the previous year (i.e., men who in the previous year only had sex with men versus men who also had sex with women in the previous year). Both approaches resulted in similar patterns of differences. We chose to report on lifetime sexual behavior to define MSMW and MSME so that experiences that occurred over a year ago would not be left unaccounted for. Chi square tests and t-tests were used to compare sexual attraction and identity, sexual preferences, sexual histories, sexual experiences, and sexual risk between MSMW and MSME, with an alpha a priori set at 0.05. Data analysis was performed using IBM SPSS software.

Ethical considerations

All study procedures were approved by the New York State Psychiatric Institute in the U.S. and the Ethics Committee of the Human Sciences Research Council Research in South Africa. Participants provided signed informed consent at the commencement of each interview and were provided information on additional resources, as well as referrals for further HIV testing and counseling, primary care, and/or mental health services, as requested.

Results

Sample Description

In total, 480 men who met the inclusion criteria participated in the study (Table 1). The mean age for this sample was 24.5 years *(SD* = 5.29*).* Among the participants, 52.3% had some post-secondary education, 35.2% had regular income, and 12.9% had medical aid coverage. In

terms of sexual identity, 69.3% identified as gay (including two participants who identified as transgender). Moreover, 44.4% of the participants were men who ever had sex with women (MSMW) and 55.6% were men who had had sex with men exclusively (MSME).

Sexual Identity

MSMW differed from MSME in terms of sexual attraction and identification (Table 1). MSMW were more likely than MSME to currently feel more sexually attracted to both men and women, while MSME were much more likely to feel more sexually attracted exclusively to men (Table 1). There were also differences regarding sexual identity. MSME were more likely to describe their sexuality as gay than MSMW, while MSMW were more likely than MSME to describe their sexuality as either bisexual or straight. However, there were also many MSMW who identified as gay and a few MSME who identified as either bisexual or straight (Table 1).

MSMW were more likely to be secretive about their sexual attraction to men and experienced significantly higher levels of identity confusion and internalized homophobia, while MSME were much more likely to be more gender nonconforming (Table 1).

Sexual and Relationship Preferences

MSMW differed from MSME in terms of sexual interests (Table 1). For instance, MSMW were more likely to find engaging in vaginal and anal sex with a woman, and receiving oral sex and performing insertive anal sex with a man pleasurable compared to MSME (Table 1). MSME, on the other hand, were more likely than MSMW to find performing oral sex and engaging in receptive anal sex pleasurable (Table 1). In terms of participants' anticipated future relationships, MSMW were more likely to prefer to be in a relationship with a woman or to be single, while more MSME preferred to be in a relationship with a man (Table 1).

Table 1. *Differences between men who have sex with men and women (MSMW) and men who have sex with men exclusively (MSME) in terms of sexual expression, identity and experiences (RDS-adjusted) (N = 480)*

	MSMW (n=213) Mean (SD)/n (%)	MSME (n=267) mean (SD)/n (%)	χ^2 or t-test
Sociodemographic			
Age (years)	25.1 (5.40)	24.0 (5.16)	-2.24*
Some post-secondary education	120 (56.3)	131 (49.1)	2.51
Regular income	84 (39.4)	85 (31.8)	3.00
Medical aid coverage	32 (15.1)	30 (11.2)	1.56
Gender current regular sexual partner			
None	51 (38.5)	105 (39.3)	
Male	72 (33.8)	162 (60.7)	
Female	21 (9.9)	N.A.	
Both male and female	38 (17.8)	N.A.	
Sexual Identity			
Sexual attraction			
To men only	66 (31.1)	251 (94.0)	208.72***
To men and women	146 (68.9)	16 (6.0)	
Sexual orientation			
Gay	71 (34.0)	261 (97.3)	225.14***
Bisexual	126 (60.3)	4 (1.5)	
Straight	12 (5.9)	3 (1.4)	
Gender non-conformity	2.27 (0.75)	3.46 (0.96)	14.95***
Secretiveness	2.78 (0.73)	1.67 (0.77)	-16.07***
Identity confusion	2.31 (0.60)	1.82 (0.52)	-9.58***
Internalized homophobia	2.40 (0.46)	1.91 (0.47)	-11.56***

Sexual Preferences					
Sexual Pleasure: (Very) Pleasurable					
Receiving oral sex from a man	153	(71.5)	139	(52.1)	45.49***
Performing oral sex on a man	96	(45.3)	180	(67.5)	44.73***
Receptive anal sex (no condom)	39	(18.3)	88	(32.8)	16.06***
Receptive anal sex (condom)	116	(54.4)	200	(74.6)	52.35***
Insertive anal sex (no condom)	72	(33.9)	56	(21.1)	38.10***
Insertive anal sex (condom)	185	(86.9)	125	(46.8)	92.36***
Vaginal sex with a woman	134	(62.9)	2	(0.7)	263.45***
Anal sex with a woman	76	(35.8)	2	(0.7)	157.58***
Relationship preferences					
Single	42	(19.7)	17	(6.4)	116.90***
Long-term with man	107	(50.2)	247	(92.5)	
Long-term with woman	64	(30.0)	3	(1.1)	
Sexual History					
Lifetime male partners[a]	0.80	(0.42)	1.09	(0.50)	6.78***
Lifetime female partners[b]	0.72	(0.35)	N.A.		
Transactional Sex					
Has given something for sex (past year)	13	(6.1)	5	(1.9)	5.88**
Received something for sex (past year)	31	(14.6)	52	(19.4)	0.16
Forced sex (past year)	9	(4.3)	31	(11.5)	16.72**
Sexual Experiences					
Sexual behavior (lifetime)					
Received oral sex from a man	169	(79.7)	191	(71.5)	4.24*
Performed oral sex on a man	120	(56.3)	212	(79.4)	29.55***
Receptive anal sex with man	104	(49.1)	230	(86.1)	77.00***
Insertive anal sex with man	192	(90.1)	115	(43.1)	113.88***
Anal intercourse with a woman	54	(28.3)	N.A.		
Sexual behavior frequency (past year)					
Performed oral sex on man	12.29	(48.2)	11.95	(28.8)	-0.09
Received oral sex from man	14.48	(49.5)	6.86	(24.5)	-2.16*

Receptive anal sex with man	7.82	(45.5)	27.93	(70.0)	3.63***
Insertive anal sex with man	17.80	(41.0)	5.83	(25.5)	-3.91***
Vaginal sex with woman	13.08	(37.1)	N.A.		
Sexual Risk (past year)					
Unprotected receptive anal sex with man	25	(11.7)	138	(51.5)	83.72***
Unprotected insertive anal sex with man	60	(28.3)	32	(11.9)	20.45***
Any unprotected anal sex with man	72	(33.8)	155	(57.8)	27.51***
Unprotected vaginal intercourse	49	(23.0)	N.A.		
Unprotected anal sex with woman	9	(4.2)	N.A.		
Any unprotected anal or vaginal sex	109	(51.2)	155	(57.8)	2.13

Note. * = $p \leq 0.05$; ** = $p \leq 0.01$; *** = $p \leq 0.005$

Ns produced in different analyses vary slightly due to the adjustment of the sample for RDS.

[a] Logged lifetime male sexual partners, oral or anal.

[b] Logged lifetime female sexual partners, oral, vaginal, or anal.

Sexual History

MSMW and MSME differed in terms of their sexual history (Table 1). MSME had on average more lifetime male sexual partners than MSMW (MSME had, by definition, no female sexual partners). In terms of transactional sex, MSMW were more likely than MSME to have given a man something in exchange for sex in the previous year. However, there was no significant difference in terms of being given something in exchange for sex by a man in the previous year. Furthermore, MSME were much more likely than MSMW to have been forced to have sex in the previous year.

Sexual Partners and Experiences

In line with how to two groups were composed, only MSMW had a regular female sex partner, either exclusively or in combination with a regular male sexual partner (Table 1).

However, the two groups did not differ significantly regarding having a male regular sexual partner: 51.6% of the MSMW and 60.7% of the MSME reported to have one.

There were significant differences between MSME and MSMW regarding their sexual experiences. In terms of lifetime sexual behaviors, MSMW were more likely to ever have received oral sex from a man and to have ever engaged in insertive anal sex with a man. MSME were more likely to have ever performed oral sex on a man and to have ever engaged in receptive anal sex. Only MSMW had ever engaged in anal intercourse with a woman. In terms of sexual behaviors in the previous year, MSMW were more likely to have received oral sex from men and to have engaged in insertive anal sex with a man, while MSME were more likely to have engaged in receptive anal sex with men. However, there was no significant difference in terms of having performed oral sex on a man. Only MSMW had participated in vaginal sex with women in the previous year.

Sexual Risk

MSME were more likely than MSMW to have engaged in receptive anal sex without using a condom in the preceding year, whereas MSMW were more likely than MSME to have engaged in insertive anal sex without using a condom in the preceding year (Table 1). When both activities are combined, MSME were still more likely than MSMW to have engaged in any condomless anal sex in the preceding year. About one in four MSMW had had vaginal intercourse without using a condom in the preceding year; the proportion of MSMW who had engaged in condomless anal sex with women in substantially smaller (4.2%). When the information across sexual activities is combined, MSME were not more likely than MSMW to have engaged in condomless sex in the preceding year.

Discussion

This study is the first to investigate differences in sexual expression and sexual experiences between behaviorally bisexual and behaviorally homosexual men in South Africa. Findings show that men who have sex with both men and women (MSMW) differ in several ways from men who exclusively have sex with men (MSME). Some of the observed differences seem self-evident and have been reported by others. For instance, MSMW were less likely to be sexually attracted to men, while MSME were less likely to be sexually attracted to women (Kajubi et al., 2008). While MSME were more likely to self-identify as gay, MSMW were more likely to identify as bisexual. However, as others did, we also found that some men who identified as exclusively homosexual ever had female sexual partners (Larmarange et al., 2009; Sheehy et al., 2014). We also found that a few men who have sex exclusively with men identified as straight or bisexual (Sheehy et al., 2014).

MSME and MSME also differed in terms of their preferences for specific sexual acts. Again, these differences were to some extent to be expected: substantially larger proportions of MSMW said that vaginal and anal sex with women was very pleasurable, compared to MSME. However, MSMW also differed from MSME in terms of what men thought to be most pleasurable in sex with men: relatively more MSMW, compared to MSME, found the insertive role to be more pleasurable, whereas MSME were more likely to find receptive roles more pleasurable. Parallel differences were observed when we compared the groups in terms of lifetime sexual behavior and the frequency of specific sexual acts in the preceding year. Others have observed similar differences in sexual practices (Lamarange et al., 2009; Sanders et al., 2013; Sheehy et al., 2014). MSME had more male partners throughout their lifetime than MSMW. In terms of a future long-term intimate relationship, MSMW were, as to be anticipated,

more likely than MSME to prefer a female partner. MSME were not more likely than MSMW to have engaged in condomless sex in the preceding year, but there were differences related to specific sexual activities. Most importantly, MSME were more likely than MSMW to have engaged in receptive anal sex without using a condom in the preceding year, whereas MSMW were more likely than MSME to have engaged in insertive anal sex without using a condom in the preceding year. This is only a crude indicator of sexual risk because it leaves out of account the frequency with which the various acts occurred as well as the number of partners with whom these acts have been practices; Smith et al. (2015), however, found similar differences based on a diary study among male sex workers who only had sex with men or with both men and women. That these two groups differed in preferences for specific sexual activities, as well as actual behavior, can help with the tailoring of HIV prevention messages. For instance, MSME are more likely to profit from messages about how to ensure that their partner uses a condom, whereas encouragement to use a condom and protect one's partner seems more tailored to MSMW. Furthermore, because some men might engage in insertive anal sex with men because they believe – as has been shown among African MSM in different contexts (Musinguzi et al., 2015; Tadele, 2010; Taegtmeyer et al., 2013) – that sex with other men is safer than sex with women and, thus, forego the use of condoms, education about the risks of anal sex for HIV infection and other sexually transmitted infections might be necessary.

Whether MSM also had sex with women seems to be associated with how they relate to their same-sex attraction. MSMW seemed to be more confused and feel more negative about their same-sex attraction, and were more secretive about it, compared to MSME. It is possible that continued sex with women contributes to the MSMW's confusion about their same-sex attraction. It is also possible that engagement in sex with women results from feeling negative

about one's same-sex attraction. Regardless the causal direction, MSMW seem to be a critical group for mental health interventions given the associations of identity confusion, internalized homophobia and secretiveness with mental health (Sandfort, Bos, Knox, & Reddy, 2015; Villicana, Delucio, & Biernat, 2016). Mental health interventions focused on dealing with negative feelings of same-sex attraction, regardless of whether that occurs in the context of a gay or bisexual identity seem of specific importance. This seems of critical importance given the fact that half of the MSMW's preference for a future long-term relationship was with a man while internalized homophobia has been shown to negatively affect relationship quality among gay men (Frost & Meyer, 2009). Without necessarily pathologizing a preference for a single lifestyle, this preference, more frequently observed among MSMW than among MSME, might result from conflicted feelings about one's same-sex attraction or pressures in one's environment to be in a relationship with a woman.

In terms of transactional sex, MSMW were more likely to have paid or exchanged items for sex in the previous year compared to MSME; this difference has also been observed in the African context by others (Sanders et al., 2007; Sanders et al., 2013). Surprisingly, MSMW did not differ from MSME in terms of having received something for sex in the previous year. A better understanding of transactional sex among MSM would have to take into account the context in which it occurs (e.g., with casual or regular partners) and underlying motivations (e.g., subsistence or consumption; Masvawure, Sandfort, Reddy, Collier, & Lane, 2015). Previous research examining the characteristics of the clients of male sex workers has found that some South African men who did not identify as gay sought commercial sex from other men in secrecy, which was likely attributable to fear of stigma and homophobia (Panday & Learmonth, 2014).

We also found that MSMW were less likely to ever have been forced to have sex than MSME. A similar finding has been reported by Micheni et al. (2015), who found that Kenyan MSM who in the past 3 months only had sex with men were more likely to report having been raped then men who also had sex with women. Other studies examining this in Africa have not found such differences (Lamarange et al., 2009; Sanders et al., 2014; Sanders et al., 2007). While sexual violence is much more prevalent in South Africa compared to other countries (Jewkes & Abrahams, 2002), it is not clear where the differences that we found could result from.

One final difference that we identified between MSMW and MSME might help to understand some of the previously discussed differences. MSME were more gender nonconforming than MSMW, both in terms of how they saw themselves and how they thought they were seen by others. It is possible that gender nonconformity, a relatively greater sense of femininity, facilitated acceptance of one's same-sex attraction and coming out, and consequently decreased the likelihood of engaging in sex with women. The association between gender nonconformity and preferences for specific sexual practices seems complex: do these preferences result from being more feminine or does the identification with femininity result from a preference for and engaging in specific sexual practices? Increased gender nonconformity might also make MSME more vulnerable to sexual violence than MSMW. These speculations and our observed differences suggest that in understanding diversity within the population being defined as MSM, both the sex of one's sexual partners and gender role identification are critical dimensions (Parker et al., 2016).

This study has a few limitations. Because our study is based on self-reported data, they may be affected by recall bias and social desirability bias. More critical is the lifetime timeframe we adopted for creating the MSMW and MSME categories. It is quite possible that the MSMW

group comprises men who had sex with a woman early in their sexual career, while, subsequently, they only had sex with men. We would like to point out, though, that when we used behavior in the previous year to group men, we found a similar pattern of differences. Furthermore, study participants were on average very young, indicating that they were still in the early stages of their sexual career and that any heterosexual engagement was not likely to have been in a distant past. Another limitation concerns our operationalization of sexual risk by not including the number of partners and the frequency of unprotected sex.

Despite these limitations, our findings highlight major differences between MSME and MSMW. Whether MSM only have sex with men or also engage in sex with women seems to be a meaningful distinction. The observed differences suggest variability in sexual developmental processes, behaviors, experiences and modes of expression among MSM in South Africa, which is essential to a comprehensive understanding of their sexual and gender diversity. Understanding these differences contributes to our comprehension of sexuality in general. However, these differences are also critical to tailor interventions aimed at improving health and well-being among the population of men who have sex with men.

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