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Male Sex Workers: Practices, Contexts, and Vulnerabilities for HIV acquisition and transmission

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Summary

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Author's Contributions

Each author completed in person and digital consultations for different regions: MRF for North America, CC for LAC, SG for East Africa, KR for Southern Africa, BB for Europe, DD for Western Africa, and RC for Asia. KS provided access to country-reported data to UNAIDS, CH completed the reviews and data abstraction for the epidemiology and risk factors, and MRF for prevention approaches for MSW. All authors provided input and guidance on the concept and outline of the manuscript. Each author then wrote different sections of the manuscript with guidance from SB. SB, MRF, and CC incorporated the various sections in writing the final manuscript.

Male sex workers (MSW) who sell/exchange sex for money or goods comprise an extremely diverse population across and within countries worldwide. Information characterizing their practices, contexts where they live, and their needs is very limited, as these men are generally included as subsets of larger studies focused on gay men and other men who have sex with men (MSM) or even female sex workers. MSW, regardless of their sexual orientation, mostly offer sex to men, and rarely identify as sex workers, using local or international terms instead. There is growing evidence of a sustained or increasing burden of HIV among some MSW in the context of the slowing global HIV pandemic. There are several synergistic facilitator spotentiating HIV acquisition and transmission among MSW, including biological, behavioural, and structural determinants. The criminalization and intersectional stigmas of same-sex practices, commercial sex, and HIV all increase HIV and STI risk for MSW and decrease their likelihood of accessing essential services. These contexts, taken together with complex sexual networks among MSW, define them as a key population underserved by current HIV prevention, treatment, and care services. Dedicated efforts are needed to make those services available for the sake of both public health and human rights.

Keywords

Sex work; MSM; HIV; criminalization; epidemiology

Introduction

Men who sell sex for money or goods (MSW) comprise an extremely diverse population across regions and within countries worldwide. They should be considered a completely different group from transgender women engaged in sex work, as the latter have clearly different needs from those of gender-conforming men who sell sex and are covered in the review by Poteat et al. in this series. Unfortunately, MSW are generally included as either a subset in studies focused on men who have sex with men (MSM), as a subgroup in studies on sex workers, where women predominate, or as part of a ‘male sex worker’ category that often includes transgender women[1,2]. Moreover, the majority of studies of male sex work as a risk factor for HIV and STI have focused on typically younger, lower income men offering sex to older gay or bisexual men in exchange for food, gifts, drugs, shelter or other means of economic support.

The growing HIV epidemics among gay men and other MSM are driven by a range of biological and structural factors that have been well characterized[3], and HIV epidemics among men who sell sex to other men are occurring in that context, although with specificities we will seek to identify in this paper. Moreover, communities of gay men and other MSM are emerging in an increasingly globalized world where new forms of, and strategies for, male-offered commercial sex are becoming possible in urban centers and tourist destinations, including the enormous reach and versatility facilitated by new communications technology [4]. Taken together, these many complex factors challenge our understanding of HIV among MSW, and our ability to provide meaningful HIV prevention and treatment services.

While clients of MSW include women, commercial heterosexual sex is likely a small fraction of all commercial sex offered by men, as conditions for women to buy sex are likely far more restricted around the world. In addition, HIV acquisition and transmission risks for men who sell sex only to women are also different from those affecting other MSW. Consequently, for this review we will focus mainly on adult men who sell sex mostly to other men or to transgender women, age 18 and older, and not include transgender persons. Data characterizing the burden of HIV among MSW were obtained passively from country-reported data to UNAIDS and actively through reviewing peer and non-peer reviewed literature. Moreover, this synthesis of information characterizing men who sell sex leverages data from different regions of the world characterizing the forms and contexts in which men (aged 18 and older) sell sex, risk factors for the acquisition and transmission of HIV ranging from individual-level risk factors to structural drivers of HIV-risk, and existing and potential future HIV prevention approaches for these men.

‘Male sex workers’ or simply ‘men who sell sex’?

A limited number of ethnographic studies have generated data characterizing MSW in most parts of the world, and some pioneering studies of the field were undertaken in the mid-late 1990s[5,6]. In fact, while we tend to label this group as ‘male sex workers,’ the connotations of female sex work often cannot be directly extrapolated to MSW. In most traditional and modern societies the existence of women who regularly offer sexual services is taken for granted, and those women are more likely to identify their activity as ‘prostitution’ or, more recently, ‘sex work’. Historically, commercial sex for a man, selling sex either to women or to men has been less commonly documented as a social phenomenon due to a combination of likely less population-level demand and lesser social acceptability for this form of commercial sex.[7] This may partly explain various distinct characteristics of commercial sex offered by men: (1) some MSW tend to avoid recognizing their practice as a regular income-generating activity and describe it as an informal practice to temporarily support themselves or pay for an expensive good; (2) regularity of this practice can vary substantially across individuals, as well as the terms of the exchange (from food, drinks or presents to ‘fees’); (3) the social and geographic organization of this practice varies importantly across societies; (4) MSW tend to be less visible than female sex workers, as their numbers are smaller than those of their female counterparts, and because they constitute a group less commonly studied—an outcome of the multi layered stigma affecting these men; (5) given their hidden nature, and the restrictive legal frameworks concerning male sex work in many lower-middle and higher-income countries alike, acceptable sexual health services are often not available to this group at all[8].

Some men who sell sex to other men are sexually attracted to men and/or self-identify as gay or bisexual (or use local terms with similar meaning); they engage in commercial sex as they need the income or given local practices concerning sex between older and younger men, or across social classes. Importantly, others are not necessarily sexually attracted to men, and do not identify as gay or bisexual; in many locations, several men who sell sex have regular female partners or have formed heterosexual families[9] but sell sex to men for a variety of reasons. In some cases, this may be a last resort to deal with poverty and the lack of opportunities; in other cases, it may be a relatively easier source of income. In some

cases, minors are forced or coerced into commercial sex and adapt to it. This not only highlights the limited value of adapting gay/bisexual community-driven HIV prevention approaches to HIV prevention with this population[10,11], but stresses the complexity of sexual networks among these men and the need for contextually appropriate responses. HIV among MSW should not, then, be regarded as an isolated problem; rather it is a compelling example of the need for comprehensive HIV responses that address the needs of this diverse group.

Epidemiology of HIV among 'Male Sex Workers'

In 2012, 52/192 countries reported data to the United Nations General Assembly (UNGASS) on HIV prevalence among 'male sex workers' collected between 2009 and 2012. Four countries reported HIV prevalence over 25%, 12 between 12.5 and 25% and 36 countries reported HIV prevalence among MSW of under 12.5%. Median HIV prevalence among male sex workers reported from 8 European countries between 2007 and 2011 was 7.8%. Data were available from five African countries, presenting a median HIV prevalence of 12.5% among MSW. However, the sample sizes were mostly very small with the highest burden of HIV reported in Cote d'Ivoire in 2012 among a sample of 96 MSW.[12] Between 2000 and 2012, reports with biologically measured HIV prevalence among MSW from 81 sites across 19 countries appeared in peer-reviewed journals or non-peer reviewed reports with clear description of sampling methods (Table 1).

Studies have consistently demonstrated the high burden of HIV among MSW in North America with estimates ranging from 5% to 31% (Table 1). Compared with MSM not engaged in sex work, North American MSW present either higher or equivalent burdens of HIV and STI [13]. This trend has been observed in other settings with MSW observed to have higher burden of HIV than other MSM including in studies completed across a number of settings such as South Africa, Namibia, Tanzania, Nigeria, Vietnam, and El Salvador[14,15,16,17]. Compared to FSW and men in general, HIV and STI prevalence are consistently higher among MSW[18]. In Latin America, several studies have characterized the high prevalence and incidence of HIV among MSW. In Argentina, studies of HIV prevalence among MSW have consistently demonstrated prevalence estimates of approximately 10% though incidence has ranged from 2.3/100 person years (PY) to 6.1 per 100 PY highlighting the differential risk status of these men[19]. Studies and surveillance characterizing the incidence of HIV among MSW are critical to better understanding the complex dynamics of HIV acquisition and transmission among these men across different time periods.

However, the phenomenon of observing higher prevalence of HIV as compared to other MSM is not consistent across regions and possibly reflects (a) differential sex roles assumed by sex workers in certain regions; (b) differential frequencies of condom use; (c) diverse baseline prevalence among MSM; and (d) diverse levels of representativeness of those figures; and (e) potentially over sampling of younger men who have limited cumulative HIV acquisition periods. In Sydney, HIV prevalence in MSW was reported to be 6.5%, significantly greater than observed among FSW (0.4%), but less than in MSM not reporting sex work (23.9%). These differences likely express differential risk levels among these

diverse populations. MSW reported significantly more non-work sexual partners than FSW, but were less likely to report unprotected anal intercourse with non-paying partners than were other MSM[20]. More recent figures for MSW in Australia can be found in the Pleasure and Sexual Health (PASH) online national survey completed in 2009,[21] in which 18.7% of male respondents reported ever having been paid for sex with another man (4.3% had been paid in the previous year). Results suggested that at least 10% of men reporting male sex work in past 12 months were HIV-infected; however, MSW reported fewer casual UAI partners than other MSM. (Garrett Prestage, personal communication). Similarly, among *money boys* in China HIV prevalence is comparable or lower than among other MSM, with a study in Shenzhen demonstrating HIV prevalence of 4.5% among money boys and 7.0% among MSM not reporting sex work[22,23]. While money boys had more male partners than MSM, they were also more likely to report consistent condom use, especially in commercial sex. Furthermore, a study of sex workers and other MSM in Tel Aviv further delineated differential risks among these populations by exploring prevalence and sexual practices among MSW, high-risk MSM, and low-risk MSM[24]. No differences were found in their knowledge regarding STI/HIV transmission, practices and burden. Among MSW, high-risk MSM and low risk MSM, STI burden was 28.3%, 23.5% and 10.3%, respectively, and the HIV burden was 5.6%, 9.2% and 0%, respectively. Taken together, these data highlight the need for improved prospective surveillance of HIV and other STIs among male sex workers. Younger MSW may be more likely to be sampled representing potentially higher HIV incidence with limited population-level incidence. To support appropriate interpretation of comparisons of the burden of HIV among male sex workers to that of other MSM or even that of other men, age-stratified HIV incidence data are needed.

Limitations of Current Data HIV Reporting Systems for MSW

There are several limitations to both the data collected by the UNGASS/GARPR (Global AIDS Response Progress Reporting) and the data extracted from extramural peer-reviewed research. Globally, the sample size of data reported to UNGASS ranges from a few participants to thousands of participants, with data sources of varying quality. This complicates comparisons across countries or regions and interpretations of trends. For instance, less than ten participants were included in the reports from diverse settings including Cape Verde, Cameroon, Algeria, Romania, and Kyrgyzstan. In addition, many of these studies include transgender women under the MSW indicator, further confounding interpretation. For example, while Pakistan reported data specifically on the indicator for MSW, the study was focused nearly exclusively on *hijras* (considered a third gender in India and Pakistan)[25]. UNGASS reports also have limited scope, and not all regions report on MSW as a formal behavioural category: for instance, MSW do not comprise an official HIV risk transmission category in North America. Thus, HIV epidemiological data specific to MSW are not routinely reported by existing surveillance programs [26]. While the extramural peer-reviewed research listed here does not share the same biases as country-reported data, there are several methodological limitations that hinder inferential conclusions drawn from these studies, including varying, often unsophisticated sampling strategies (pertinent data are generally derived from convenience samples with limited generalizability to the broader population of MSW); and the lack of a standard behavioral recall window (e.g., life history

vs. past 3, 6 or 12 months). In both UNGASS reports and extramural research, definitional issues emerge: UNGASS reporting defines sex work as "consensual sexual services offered by adults in return for cash or payment in kind,"[27] which can be subjectively interpreted; extramural research cited variably includes other compensation, including drugs, food, and shelter, potentially conflating sex work with both drug-sex exchanges and survival sex. Moreover, the increasing trend of sex work transitioning from being street-based to internet-based further complicates the identification, sampling, and assessment, limiting the scientific rigor of epidemiological research [28]. With these caveats posed by the proportion of partners of different types and risk practices by partner types, the epidemiological data suggest that MSW globally remain at very high risk for HIV acquisition and transmission, even compared to other high risk populations.

HIV Surveillance Recommendations for Male Sex Workers

Consistently applied surveillance definitions and methods are crucial to advance the knowledge base for MSW including standardizing definitional measures for MSW and globally delineating MSW as a risk transmission category in HIV/AIDS reporting. In this regard, we recommend five changes to MSW-specific data collection and reporting to support country-led programming. First, current surveillance definitions (consensual sexual services between adults for cash or payment in kind in the past year) could be clarified to include sex-for-cash from drug-sex exchanges, survival sex (sex for food/shelter), and less traditional benefits (such as transport or entertainment) or potentially more indirect sexual services (such as webcam performances) that may confound commercial sexual risks. Second, surveillance guidelines should specifically suggest distinguishing between lifetime sex work and current (past-year) sex work to facilitate better estimations of MSW prevalence in communities and associations between past sex work and current HIV-related health outcomes. Third, ensuring that risk transmission categories encompass multiple options will allow for better distinctions among populations with intersecting risk behaviors (e,g., MSW who are MSM could be defined as MSW-MSM). Fourth, better quantification of MSW-specific risks could be achieved by assessing commercial sexual risk by partner type and sex (e.g., querying for non-commercial; paying; and paid sexual partnerships by partner sex and associated HIV risk behavior). Finally, assessing career duration and sex work frequency (number of paid sexual acts) may contribute to better understanding of dose-response associations between selling sex and HIV transmission risk, and provide useful context for optimal intervention delivery. While this level of disaggregation may not be necessary for all agencies tracking the burden of HIV, these indicators would support organizations and agencies focused on the implementation and evaluation of programs supporting male sex workers.

HIV Acquisition and Transmission Risks among MSW

Several approaches are available to assess determinants of risk and vulnerability to HIV in specific populations and contexts. The modified social ecological model (MSEM) composed of multiple layers of risks for HIV acquisition and transmission ranging from individual level characteristics such as biological and behavioral factors that potentiate HIV infection, characteristics of sexual networks, community level determinants including access to HIV

prevention services and potential barriers to those services, and finally the national policies that potentiate or mitigate the potential coverage of HIV prevention, treatment, and care programs for male sex workers[29]. Subsequently, syndemics theory[30] facilitates understanding of how these disparities and consequent psychosocial health conditions further predispose MSW to increased HIV risk compared to other MSM populations (Table 2).

The biological risks of HIV acquisition among MSW are shared with those of other MSM. These biological risks have been well characterized and include the efficient transmission of HIV during unprotected anal intercourse. MSW are characterized by high numbers and frequencies of male partnerships resulting in large and non-dense sexual networks which have both been established as risk factors for HIV among MSM[3]. These risks have also been characterized in some countries among MSW such as Nigeria and Kenya[31,15]. Across Sub-Saharan Africa, consistent condom use is variable among MSW with levels ranging from 36% in Kenya to over 70% in Cote D'Ivoire.[12,32] Moreover, Southern and Eastern Africa are among the few places in the world where HIV disproportionately affects women, and where MSW' heterosexual identity and female non-paying sexual partners, as well as female clients, may represent risk for both acquisition and transmission among these men[33]. Similarly, the limited supply of condom-compatible lubricants (CCL) in many low and middle income countries may further increase risks among MSW[34].

There are several themes that emerge across regions when reviewing HIV risks affecting individual MSW including economic disparities, sexual and physical abuse, drug use, and low socioeconomic status as well as the occupation-related risks associated with commercial sex. In many places and contexts, some MSW report high levels of background adversities, including sexual and physical abuse [18]; homelessness[35]; and low educational attainment [36]. Furthermore, MSW are more likely than other MSM to report racial and sexual minority statuses,[18] which are associated with higher likelihood of serodiscordant sexual partnerships in many high income settings such as the United States and the United Kingdom[37]. One of the most consistent findings among MSW is the significant reporting of concurrent substance use among these men ranging from alcohol to injecting drug use. In North America, substance use is associated with higher risk practices and lower SES among MSW[38]. Alcohol use in Kenya and injecting and non injecting drug use in Asia have been shown to be associated with higher risk sexual acts among MSW[39]. In addition, among MSW who inject drugs in the US, higher numbers of male paying partners are associated with greater HIV prevalence [40]. Similar findings have been described among MSW in several LAC countries including Mexico, Nicaragua, Argentina, and Peru, suggesting the consistent applicability of syndemic theory to MSW[41]. At the same time, data from Africa show that injecting drug use among MSW is very low, usually less than 3% of MSW[42,12].

Occupational health risks among MSW have been shown in North America to include conditions of economic necessity fomenting unprotected sex[43]; sex with multiple partners; sexual role versatility, depending on client preferences; and sex with male, female, and transgender partners, as well as reciprocal sex exchange – purchasing sex from other sex workers [44]. Potentiating the high acquisition and transmission risks associated with UAI are the high burden of prevalent and incident genital ulcerative diseases. In some countries of

Latin America and the Spanish speaking Caribbean, sex workers are often offered free medical check-ups at public health clinics[45]. However, MSW report being less willing to use those services when compared to female or transgender sex workers as they tend not to see themselves (or may be unwilling to come forward) as 'sex workers', and thus may have less access to periodic screening, prevention and care services for STIs. Consequently, there may be significant levels of non- or minimally symptomatic STIs among these men given that condom use is less effective in preventing these infections as compared to HIV. Similarly, for Sub-Saharan Africa, high rates of HPV and consequent anal papillomas are likely associated with increasing acquisition risks among MSW in Coastal Kenya[46,47].

Also, MSW may be more likely to report older male partners, a finding which has been associated with high rates of HIV infection among African American MSM [37]. While there is limited research of youth and adolescent men selling sex because of the complexity in ensuring appropriate informed consent, and the additional legal issues involved, many MSW across a number of regions report initiating sex work at young ages, sometimes under coercion or force[48]. The high prevalence of HIV observed among men in their late teens and early twenties in many places, suggests that HIV acquisition risks are likely significant during adolescence for some of these men.

At the community level, risk may be mitigated by available HIV prevention, treatment, and care services if barriers to the uptake of those services are removed. The most important barrier is stigma, and often it is sufficient for MSW to avoid accessing HIV prevention services. Stigma acts by devaluing, labeling, and stereotyping MSW resulting in the loss of status, unfair and unjust treatment, and social isolation of these men[49]. MSW often face intersecting stigmas: having sex with other men; engaging in illegal sexual activity; presumption of HIV infection, drug use; and differential socioeconomic status among racial minorities. The illegal nature of sex work in much of the world, coupled with the likelihood of male sexual partners, engenders an environment of multi layered marginalization. Even in locales with high acceptance of sexual diversity, the commercial nature of sex work creates a milieu removed from traditional gay community norms, which according to power dynamics may favor riskier sexual practices[44]. In many places, while men from diverse backgrounds may engage in commercial sex, society's most vulnerable men will be more likely to become involved, often in less secure conditions, and may also increase their vulnerability: in the U.S., young males who engage in commercial sex show disparately higher rates of depression and substance use which may persist after sex work involvement, perhaps due to the stresses of endured stigma [18].

The majority of public policies affecting MSW represent structural barriers to care rather than improving access to it. Broadly, there are three main categories of criminalization that intersect with male sex work including the criminalization of sex work, the criminalization of same-sex practices, and the criminalization of non-disclosure of HIV infection. These policies or stigmatizing contexts may also drive emigration of MSW to countries with supportive legislation and improved working environments[50]. For example, MSW from some countries in Eastern Europe that have adopted punitive laws analogous to those existing in Sweden, targeting buying and/or selling sex with misdemeanor or criminal charges have been known to migrate to countries in Central and Western Europe such as

Germany and Switzerland. The relationship between criminalization of same-sex practices and difficulty in researching and addressing the HIV prevention, treatment, and care needs of MSM has been well described in the literature. Finally, the criminalization of non-disclosure of HIV infection is relevant to MSW in many countries as a potential barrier to the uptake of HIV-related services including testing[51]. A recent report from Human Rights Watch in Tanzania found multiple accounts of rape of male sex workers by police further highlighting the limited repercussion of rights violations affecting these men[52]. The general lack of legal recourse after violence observed in numerous settings, limited economic resources, and increasing tendency to use condom-carrying as evidence of sex work all further complicate safer male sex work.

HIV Prevention, Treatment, and Care Approaches for MSW

Despite the high burden of HIV infection and elevated risk status, limited intervention studies have specifically addressed the needs of MSW (Table 3). Few randomized controlled trials have assessed interventions developed to help MSW reduce their HIV risks, though many interventions for MSM and female sex workers have been tested. There is a pressing need for HIV prevention programs targeting MSW given the efficient transmission of HIV during anal intercourse and the persistent necessity of high numbers of sexual partnerships to support income. Given the complex risk environment for these men and akin to other populations, the most effective intervention designs likely represent combinations of behavioral, biomedical, and structural approaches.

Intervention approaches should probably be very specific to the local contexts, paying attention to the legal framework, levels of visibility as well as specific identities of MSW, and the availability of both general and MSM-focused HIV services. By no means should interventions expose MSW to public sight – beyond their own choices, and legal threats should be specifically prevented.

In various contexts, formative research suggests that individual- and network-level interventions incorporating incentivized harm reduction approaches [53] and access to social services and resources, and medical (including mental health) care[44] could be coupled with community-level anti-stigma campaigns [54] for maximal effectiveness. Bio-behavioral approaches that incorporate the use of antiretroviral drugs for pre-and post-exposure prophylaxis (PrEP and PEP, respectively) likely represent options with significant utility among MSW[55]. As described earlier, some MSW report difficulties negotiating condom use during anal sex with clients or may accept higher rates for unprotected sex. This may especially be the case among lower SES MSW working in open-space venues who may have concurrent psychosocial risks for HIV. Innovations in testing are emerging as an important area in addressing the crucial problem of undiagnosed HIV infections[56] Given the limited targeted services, significant social stigma, and high incidence and prevalence of HIV among many MSW, those who acquire HIV infection may remain undiagnosed for a long time. Addressing the needs of MSW living with HIV is vital to ensure that their own health needs are addressed including the prevention of HIV super infection as well as onward transmission of HIV to all sexual partners [57]. In addition, mean and total viral load in a population has been linked to population-level transmission rates of HIV[58]. For MSW,

ART-based prevention approaches may represent a relevant option as those may enable them to control their HIV risks not solely based on condom use, though strategies to ensure adherence would be needed if those approaches are employed[59]. Intervention designs that help MSW remediate such background risk factors as substance use, depression, legal assistance, employment readiness, educational attainment, homelessness, and low social capital while also providing HIV prevention and testing, medical care, and PreP/PeP, may be ideally suited to this population with multiple-needs. This approach is currently being implemented and evaluated [60].

The role of structural changes, including those needed in legal frameworks, is fundamental in many parts of the world. In South Africa, protective constitutional provisions for gay men and other MSM are at odds with sex work remaining illegal. Consequently, there is no national program to address the needs of MSW, and such task is covered in part by non-governmental organizations such as the Sex Worker Education and Advocacy Taskforce (SWEAT) to address the needs of sex workers. The work of SWEAT and its allies resulted in the South African government including decriminalization of sex work in earlier iterations of its national health strategic plan (NSP), though this did not materialize. Decriminalization has now been included again in the country's revised 2012 current NSP and thus it is hoped to occur during the years of 2014–2015. The decriminalization of sex work in South Africa would be akin to the Delhi High Court overturning Penal Code 377—as a means of protecting public health[61]. Decriminalization of sex work and access to protective public health and legal structures would likely increase our understanding of MSW-specific health issues, improve service uptake, and, from an occupational health perspective, foster improved working conditions [62]. However, legal frameworks affecting MSM are becoming ever more complicated with new laws in Nigeria, Uganda, and the reinstatement of Penal Code 377 in India in 2013. These laws may further limit the ability to effectively address the needs of MSW. In the U.S. and Canada, sex work is largely illegal; even in some Mexican cities where sex work is quasi-legal and registered, MSW do not often register with municipal authorities for fear of adverse consequences[63]. Where legal and cultural contexts make it feasible, the provision of legal protections and HIV/STI surveillance and treatment for adult film actors in Los Angeles might be used as a model for the provision of such services to the broader population of MSW[64]. In Brazil, 'male sex workers' can report sex work as an official occupation facilitating access to social benefits and there is a history of government-sponsored anti-homophobia social marketing campaigns; however, recent government changes in Brazil may negate these advances in HIV prevention[65]. Thus, while governmental entities are crucial stakeholders, it is communities of MSW that need to be supported to be at the anchor of an effective response to their needs.

There are several active community-driven networks that include MSW. For example, the Sex Workers Rights Advocacy Network (SWAN) operates in Central and Eastern Europe and Central Asia (www.swannet.org) and involves MSW on the Steering Committee and Advisory Board. SWAN is a network of civil society organizations engaged in advocating for the Human Rights of the sex workers in Central and Eastern Europe, Commonwealth of Independent States (CIS) and South-Eastern Europe. Another relevant regional entity for MSW includes the International Committee on the Rights of Sex Workers in Europe

(ICRSE) where the majority of the Board are sex workers (www.sexworkeurope.org). The ICRSE strives to raise awareness about the social exclusion of female, male and transgender sex workers in Europe, to promote the human and civil rights of all sex workers at national, regional and global levels and to create strong alliances between sex workers, allies and other civil society organizations. Finally, the Global Network of Sex Workers Projects (NSWP) is the biggest sex worker-led network and includes MSW leadership. Small-scale resources include HOOK, an MSW-based website that promotes safer sex work and positive cultural identity (www.hookonline.org). Given the increasing use of Internet sites and smart phone applications among MSW (such as Craigslist, Rent boy, Manhunt, and Grindr) to arrange commercial sex encounters, new interventions provided in virtual spheres have great potential for saliency and reach, although they have, so far, been sparingly evaluated.

Moving Forward

Men who sell sex represent a subset of men who have been mostly ignored to date in the context of the global HIV/AIDS response. While there has been limited study or systematic surveillance of the burden of HIV among these men, consistent evidence is emerging that shows that their HIV burden has been sustained or increasing in the context of rising HIV rates among MSM more broadly. There are several clear facilitators for HIV acquisition and transmission including biological, behavioural, and structural factors. However, many public health questions regarding MSW remain understudied. Given their diverse identities and contexts, to what extent could partially standardized definitions be used to facilitate programme design and implementation? How profound are their HIV-related health disparities compared with other MSM, after controlling for multiple cultural intersectionalities (younger age, racial/ethnic minority status)? What individual-, community-, and structural-level factors mediate and modify HIV riskposed by commercial sex? How could MSW be offered comprehensive health services that, respecting their autonomy, can prevent an increase in their vulnerability? What are the positive/protective aspects of MSW involvement beyond immediate sustenance (e.g., social capital, social mobility)? Is there significant scientific stigma related to conducting HIV prevention and research with MSW, and has this manifested to limit our knowledge base?

Encouragingly, public and private funders are recognizing that high-impact HIV prevention and care has to include key populations such as MSW as part of comprehensive HIV responses [66,67]. There are increasing numbers of programs such as STAR-STAR in Macedonia which was founded and governed by MSW supporting their peers partly funded by the Global Fund for AIDS, Tuberculosis, and Malaria. Moreover, USAID, the President's Emergency Plan for AIDS Relief (PEPFAR), and US CDC are funding HIV prevention, treatment, and care research and programming for MSW. Programs such as these that support strengthening of community groups focused on addressing the needs of male sex workers specifically to ensure provision and uptake of the range of proven and emerging HIV prevention, treatment, and care strategies are crucial to ensure a changing trajectory of the HIV epidemic among these men. Ultimately, dedicated advocacy, funding, surveillance, research initiatives, and a range of preventive options for MSW are essential for not only public health, but also social justice and human rights.

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Key Messages

1. The burdens of HIV and health-related needs of men who sell sex are understudied with the majority of research conducted within studies of men who have sex with men, female sex workers, and transgender women.
2. The majority of clients of men who sell sex are other men. However, those male clients often do not self-identify as gay or bisexual and many may have regular female partners.
3. Risks for HIV acquisition exist at multiple levels for MSW including the efficient transmission of HIV in unprotected anal intercourse, high numbers of sexual partners, large and complex sexual networks, and compounded intersectional stigmas
4. Criminalization of sex work, same-sex practices, and HIV non-disclosure all represent barriers to safe commercial sex offered by men.
5. Increasing access to condoms and condom compatible-lubricants is necessary and represents a core strategy for HIV prevention, but will not be sufficient to change the trajectory of sustained and growing HIV epidemics among MSW.
6. Combination HIV prevention programs for MSW should address the biological drivers of HIV infection with anti-retroviral prevention and treatment approaches but also the social contexts where MSW engage in selling sex.
7. Dedicated advocacy, funding, definitional consistency for surveillance, and research initiatives for MSW are essential for the sake of not only public health, but also social justice and human rights.

Table 1

HIV Prevalence among Samples of Men who Sell Sex from 2000–2012

]	Subjects included	Sampling method	Sample Size	Prevalence (%)	Lead author, date
Sub-Saharan Africa					
Cote D'Ivoire- Abidjan	MSW	Clinic-based survey	96	50.00	Vuylsteke, 2012[12]
Kenya- Mombasa	MSW	Clinic-based survey	259	19.70	Van der Elst, 2009[68]
Kenya- Nairobi	MSW	RDS	273	26.30	Muraguri, 2012[69]
Kenya- Nairobi	MSW	Hot spot based/snowball	507	40.00	McKinnon, 2013[70]
South and South East Asia					
Bangladesh- multi city	MSW	Non-random organization	284	0.70	Azim, 2008[71]
Bangladesh- Barisal	MSW	Performance evaluation	77	0.00	Abdul-Quader, 2012
Bangladesh- Chittagong	MSW	Performance evaluation	361	0.00	Abdul-Quader, 2012
Bangladesh- Dhaka	MSW	Performance evaluation	1381	0.51	Abdul-Quader, 2012
Bangladesh- Khulna	MSW	Performance evaluation	93	1.08	Abdul-Quader, 2012
Bangladesh- Rajshahi	MSW	Performance evaluation	619	0.00	Abdul-Quader, 2012
Bangladesh- Rangpur	MSW	Performance evaluation	40	0.00	Abdul-Quader, 2012
Bangladesh- Sylhet	MSW	Performance evaluation	305	0.00	Abdul-Quader, 2012
India- Mumbai	MSW	Clinic-based survey	24	17.00	Shinde, 2009[73]
India- multi city	MSW	Probability-based	2023	14.50	Brahmam, 2008[74]
India- multi city	MSW	Clinic-based/peer referral	334	43.60	Narayanan, 2013[75]
Indonesia- Jakarta	MSW	Community-based survey	250	3.60	Pisani, 2004[76]
Pakistan- Abbottabad	MSW- Bantha	RDS	83	0.00	Hawkes, 2009[77]
Pakistan- Karachi	MSW	Venue-based/peer referral	409	3.90	Bokhari, 2007[78]
Pakistan- Karachi	MSW	Surveillance study IBBS	199	7.00	Altaf, 2006[79]
Pakistan- Lahore	MSW	Venue-based/peer referral	400	0.00	Bokhari, 2007[78]
Pakistan- Rawalpindi	MSW- Bantha	RDS	195	0.50	Hawkes, 2009[77]
Pakistan- Rawalpindi	MSW-Khusra	RDS	253	2.40	Hawkes, 2009[77]
Pakistan- Rawalpindi	MSW- Khotki	RDS	364	0.00	Hawkes, 2009[77]
Pakistan- 2005	MSW	RDS national AIDS	1779	0.40	Mumtaz, 2010[80]
Pakistan- 2006–7	MSW	RDS national AIDS	2289	1.50	Mumtaz, 2010[80]

]	Subjects included	Sampling method	Sample Size	Prevalence (%)	Lead author, date
Pakistan- 2008	MSW	RDS national AIDS	1200	0.90	Mumtaz, 2010[80]
Thailand- Bangkok	MSW	Venue-based sampling	414	18.80	Toledo, 2010[81]
Vietnam- An Giang	Selling sex to males in 12m	Community-based survey	197	7.60	Pham, 2012[16]
Vietnam- Hanoi	MSW-Heroine user*self rep	Time-location sampling	79	29.10	Clatts, 2007[82]
Vietnam- Ho Chi Minh	MSW* self-reported	Time-location sampling	200	5.60	Hiep, 2011[83]
East Asia					
China- Beijing	Money boy	Clinic-based convenience	85	5.90	Chow, 2012[84]
China- Chengdu	Money boy	Not reported	205	0.50	Chow, 2012[84]
China- Chengdu	Money boy	Snowball sampling	120	4.20	Chow, 2012[84]
China- Chongqing	Money boy	Snowball sampling	47	12.80	Chow, 2012[84]
China- Chongqing	Money boy	Snowball sampling	71	9.90	Chow, 2012[84]
China- Chongqing	Money boy	Snowball sampling	54	7.70	Chow, 2012[84]
China- Chongqing	Money boy	Snowball sampling	190	11.10	Chow, 2012[84]
China- Chongqing	Selling sex in past 6 months	Snowball sampling	449	14.40	Zhang, 2012[85]
China- Guangzhou	Money boy	Venue-based purposeful	151	11.30	Chow, 2012[84]
China- Guangzhou	Selling sex to male/female	Long-chain referral	409	6.20	He, 2009[86]
China- Jining	Money boy	Clinic-based/peer referral	41	7.30	Chow, 2012[84]
China- Shenzen	Money boy	Time-location sampling	850	4.50	Zhao, 2012[87]
China- Shenzen	Money boy	Time-location sampling	418	3.40	Chow, 2012[84]
China- Shenzen	Money boy	RDS	505	3.60	Chow, 2012[84]
China- Shenzen	MSW	Time-location sampling	394	5.30	Cai, 2009[88]
China- Tianjin	Money boy	Venue-based sampling	89	6.70	Chow, 2012[84]
China- multi city	Money boy	RDS	95	0.00	Chow, 2012[84]
China- city not reported	Money boy	Venue-based/peer referral	118	5.10	Chow, 2012[84]
China- city not reported	Money boy	Peer referral	86	0.00	Chow, 2012[84]
Oceania					
Australia- Sydney	MSW	STI clinic records	94	6.50	Estcourt, 2000[20]
Australia- Victoria	SW MSM	Sentinal surveillance	700	1.10	Vella, 2012[89]
West and Central Europe					
London, UK	MSW	Clinic-based sampling	636	9.00	Sethi, 2006[90]

]	Subjects included	Sampling method	Sample Size	Prevalence (%)	Lead author, date
Middle East					
Israel- Tel Aviv	MSW- street	Venue-based sampling	32	6.30	Mor, 2012[91]
Israel- Tel Aviv	MSW- Internet	Internet-based sampling	21	4.50	Mor, 2012[91]
North America					
Canada- Vancouver	Sex trade worker	Community-based survey	126	7.30	Weber, 2001[36]
Mexico- Tijuana	MSW	Purposive cross sectional	40	5.00	Katsulis, 2012[43]
USA- Atlanta	MSW	Not original data	234	29.40	Elifson, 1993[92]
USA- Massachusetts	MSW	Wide recruitment	32	31.00	Reisner, 2008[93]
USA- San Francisco	MSW	Street-recruitment	154	14.00	Bacon, 2006[94]
South America					
Argentina- multi city	MSW	Venue-based/peer referral	114	11.4	Farias, 2011[95]
Brazil- Campinas	MSW	RDS	106	13.00	Tun, 2008[96]
Peru- Lima	MSW- higher SES	Venue-based sampling	24	4.20	Bayer, 2010[97]
Peru- Lima	MSW- lower SES	Venue-based sampling	61	23.00	Bayer, 2010[97]
Peru- Andes region	MSW	Venue-based sampling	1206	4.10	Valderrama, 2007[98]
Peru- Coastal cities	MSW	Venue-based sampling	1206	9.10	Valderrama, 2007[98]
Peru- Jungle cities	MSW	Venue-based sampling	1206	13.90	Valderrama, 2007[98]
Peru- city not specified	Work as a sex worker	Convenience sample	349	24.36	Lama, 2006[99]
Uruguay- Montevideo	MSW	Street-based recruitment	317	21.80	Montano, 2005[100]
No location					
Internet based	Male escort	Internet-based recruitment	46	13.00	Parsons, 2007[101]

Table 2

History of commercial sex and prevalent HIV infection among men who have sex with men, 2000–2012

Significant Risk Factor	Measure of association	Study population	Sampling Frame	Sample Size	Magnitude (95% Confidence Interval	Location	Lead author, date
Been paid for sex by a man	Odds Ratio	MSM-PWID	Street-recruitment	227	1.67 (0.64–4.36)	USA	Bacon, 2006[94]
Work as a sex worker	Odds Ratio	MSM	Surveillance study	3280	1.91 (1.31–2.79) aOR 1.89 (1.03–3.47)	Peru	Lama, 2006[99]
Independent correlates of UAI: Ever sold sex	Odds Ratio	MSM	RDS	428	2.2 (1.20–4.20)	China	Ruan, 2008[102]
Selling sex	Odds Ratio	MSM	Cross-sectional	599	8.61(1.20–61.69)	Vietnam	Nguyen, 2008[14]
Had commercial sex	Odds Ratio	MSM	Non-probability	537	1.7 (1.10–2.70)	Malawi, Namibia, Botswana	Baral, 2009[17]
Paid sex with men in past 6 months	Odds Ratio	MSM	Cross-sectional survey	1692	2.1 (1.10–3.80)	China	Xiao, 2009[103]
Self reported “Money Boy”	Odds Ratio	MSM	Snowball sampling	513	6.43 (1.54–28.86)	China	Feng, 2010[104]
Commercialanal intercourse	Odds Ratio	MSM	Venue-based sampling	542	2.8 (1.0–8.3)	South Africa	Burrell, 2010[105]
Paid by someone for sex in the past 12 months	Odds Ratio	MSM	RDS	509	4.6 (1.0–21.4)	Tanzania	Dahoma, 2011[106]
Sold sex in the past 12 months	Bivariate %	MSM	RDS	596	17.9 (7.8–29.9) p=.006	El Salvador	Creswell, 2012[107]
Male sex worker	Odds Ratio	MSM and MSW	Venue-based	283	0.6 (0.1–12.4) MSW vs high risk MSM	Israel	Mor, 2012[91]
Selling sex in the past 12 months	Prevalence Ratio	MSM	Community-based survey	381	1.56 (0.70–3.47)	Vietnam	Pham, 2012[16]
Exchanging sex for money in the past 6 months	Odds Ratio	MSM	RDS	503	2.3 (0.4–13.0)	China	Zhang, 2012[108]
Received money for sex from a male in past 12 months	Crude odds ratio	MSM	Venue-based survey	3304	1.7 (1.11–2.61)	Canada	Myers, 2008[13]
Get money/drugs for sex	Odds Ratio	MSMW	RDS	2092	0.79 (0.51–1.21)	USA	Gorbach, 2009[109]
Engaged in commercial sex	Odds Ratio	MSM	Non-probability and RDS	250	5.93 (1.92–13.89)	China	Xu, 2013[110]
Sex work ever	Odds Ratio	MSM	RDS	416	3.30 (1.20–8.60)	Ecuador	Jacobson, 2014[111]

Table 3

Reported HIV Prevention Studies for Men who Sell Sex

Study Location (Country)	Sampling Method	Number (N) of MSW	Underlying Behavior Change Theory	Prevention Evaluation Results	Findings and suggestions for further research and/or intervention development	Lead Author, Date
New Orleans (USA)	Convenience (street)	N=211	Health Belief Model	N/A	Risk-taking associated with economic dependency on sex work; high pleasure in sex work; less control over situation. Perception of severity of HIV not associated with risk behavior. Increased perceived susceptibility and perceived benefit of condom use associated with increased risk-taking behavior.	Simon, 1993 [112]
London (UK)	Convenience (escort agencies)	N=88	Peer education and role-modeling	Inconclusive	Intervention increased referrals but failed to change HIV/STI knowledge and risk behavior. Collective action (social transformatory model) may be more appropriate than peer education model.	Ziersch, 2000 [113]
Pattaya and Bangkok (Thailand)	Convenience (bars)	N>100	Peer education	Ineffective	Interventions previously provided have been discontinuous and diffuse in focus. Bar-based interventions need to be developed that are focused on behavior and agency, not identity; and that	McCamish, 2000 [114]

Study Location (Country)	Sampling Method	Number (N) of MSW	Underlying Behavior Change Theory	Prevention Evaluation Results	Findings and suggestions for further research and/or intervention development	Lead Author, Date
					build peer and managerial support. build peer and managerial support.	
Vientiane (Laos)	Purposive/time-location sampling	N=12	N/A (formative)	N/A	Comprehensive HIV/STI education, promotion of 100% condom use model suggested for MSW.	Toole, 2006 [115]
Houston (USA)	Targeted sampling (street)	N=399	Harm reduction; theory of reasoned action; social-cognitive theory; RCT	Effective	Prevention activities among MSW must be brief; targeting HIV + should be developed. Younger, hetero, HIV-MSW were least likely to complete intervention. Interventions with SCT and TRA components were no more effective than basic harm reduction.	Williams, 2006 [53]
Unstated—likely New York City (USA)	Convenience (Internet-based escorts)	N=46	N/A (formative)	N/A	Interventions should include Internet-based safer sex work information; substance use treatment; mental health counseling; social support/ networking; health care/insurance; money management; and legal assistance.	Parsons, 2007 [116]
Boston (USA)	Convenience	N=32	N/A (formative)	N/A	Intervention development activity using qualitative research indicated need for multipronged, incentivized, CRCS-type	Reisner, 2008 [117]

Study Location (Country)	Sampling Method	Number (N) of MSW	Underlying Behavior Change Theory	Prevention Evaluation Results	Findings and suggestions for further research and/or intervention development	Lead Author, Date
					interventions that also attend to legal needs.	
					interventions that also attend to legal needs.	
					interventions that also attend to legal needs.	
Santo Domingo and Boca Chica (Dominican Republic)	Respondent-driven sampling	N=72	N/A (formative)	N/A	Individual- or behavioral-level approaches unlikely to be effective in altering important contextual factors contributing to HIV risk. Interventions should be developed that are comprehensive and multi-level, and reduce stigma associated with male sex work. More focus should be given to understanding context relative to more proximate behavioral determinants.	Padilla, 2008 [118]
Mexico City (Mexico)	Convenience	N=36	N/A (formative)	N/A	Targeted interventions are not currently offered. Interventions should be developed that address structural vulnerabilities: access to healthcare, prevention information and tools; community social support; stigma and discrimination; and sexual exploitation.	Infante, 2009 [119]
Mombasa (Kenya)	Not provided (newly enrolled cohort study)	N=259	N/A (survey methodology)	N/A	Though not appropriate for MSW with poor reading skills (~20%), ACASI	Van der Elst, 2009[120]

Study Location (Country)	Sampling Method	Number (N) of MSW	Underlying Behavior Change Theory	Prevention Evaluation Results	Findings and suggestions for further research and/or intervention development	Lead Author, Date
					may derive more honest responses on sexual risk behaviors in inte may derive more honest responses on sexual risk behaviors in inte may derive more honest responses on sexual risk behaviors in inte may derive more honest responses on sexual risk behaviors in inte may derive more honest responses on sexual risk behaviors in inte may derive more honest responses on sexual risk behaviors in inte may derive more honest responses on sexual risk behaviors in inte may derive more honest responses on sexual risk behaviors in inte may derive more honest responses on sexual risk behaviors in inte may derive more honest responses on sexual risk behaviors in inte may derive more honest responses on sexual risk behaviors in inte	
Corumba (Brazil)	Not provided	N=19	Social-environmental: cohesion, networks, resources	Effective	Increased perceptions of social cohesion were marginally associated with fewer reported unprotected sex acts. Increased access to and management of social and material resources were significantly associated with fewer unprotected sex acts.	Lippman, 2010 [121]
Shenzen (China)	Time-location sampling	N=394	N/A	Suggestive	Current health promotion efforts in entertainment venues “likely effective.” More attention should be paid to MSW in parks and family clubs, and targeted toward MSW migrants from high HIV prevalence areas.	Zhao, 2011 [122]
Mainland China	Meta-analysis of published reports	N/A	N/A	Suggestive	UAI among MSW declined significantly between 2004–2005 and 2006–2007.	He, 2011 [123]

Study Location (Country)	Sampling Method	Number (N) of MSW	Underlying Behavior Change Theory	Prevention Evaluation Results	Findings and suggestions for further research and/or intervention development	Lead Author, Date
Mombasa (Kenya)	Time-location sampling	N=425 (baseline); N=442 (follow-up)	Peer education, HIV CTRS, drop-in center, condom distribution	Effective	Increased HIV testing uptake; increased condom use with male partners (both paying and non-paying); increased UAI HIV risk knowledge. Peer education dose associated with condom use for AI with male paying partners; HIV testing uptake; drop-in center attendance; UAI HIV risk knowledge.	Geibel, 2012[32]
Shenzen (China)	Convenience	N=28	N/A (formative)	N/A	Interventions for money boys should include psychological assistance, STI information and risk reduction, physical safety, and employment skills. Internet-based information pages and education provided by managers (“mommies”) are suggested.	Liu, 2012 [124]
Mysore (India)	Purposive sampling	Not provided	Structural: drop-in center; police liaisons; peer education; rapid response teams	Effective (MSW and FSW aggregate data)	Structural interventions (drop-in center, police liaisons, rapid response team) and peer education associated with longitudinal decrease in violent incidents reported by sex workers (MSW and FSW results aggregated).	Reza-Paul, 2012 [125]

Study Location (Country)	Sampling Method	Number (N) of MSW	Underlying Behavior Change Theory	Prevention Evaluation Results	Findings and suggestions for further research and/or intervention development	Lead Author, Date
Miami and Ft. Lauderdale (USA)	Convenience	N=119	RESPECT and Enhanced RESPECT; RCT	N/A (baseline results only)	Bisexually-behaving MSW may benefit from network-level interventions that include mental health care and substance use treatment components.	Friedman, 2013 [126]