Female sex workers in Africa: Epidemiology overview, data gaps, ways forward

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Epidemiological and socio-legal overview

More than three decades after the first reported case of AIDS (1983), Africa continues to experience unacceptable levels of new HIV infections. East Africa and Southern Africa remain most affected by the epidemic with 34% of the global burden of infections concentrated in 10 Southern African countries (D'Costa, Plummer, Bowmer, Fransen, Piot, Ronald, *et al*. 1985; Joint United Nations Programme, 2005; Moses, Plummer, Ngugi, Nagelkerke, Anzala & Ndinya-Achola 1991; Ngugi, Simonsen, Bosire, Ronald, Plummer, Camero, *et al.* 1988; WHO Library Cataloguing in Publication Data 2011). Some of these countries reported the first case of HIV infection early in the epidemic (Ethiopia 1984; Kenya 1985). Female sex workers (FSWs) comprise an important sub-population in the epidemiology of HIV infection in many countries as evidenced by HIV prevalence amongst FSWs and their clients often being 10–20-fold higher than that in the rest of the general population (Laga, Monoka, Kivuvu, Malele, Tuliza, Nzila, *et al.* 1993). For example, in Ethiopia, after the first HIV infection was reported in 1984, only 4 years later, the HIV prevalence amongst FSWs had already risen to 17% (Cote, Sobela, Dzokolo, Nzambi, Asamoall-Adu, Labbe, *et al.*). Today, even within Africa's generalized epidemic, research shows that FSWs remain an important epidemiological sub-population in relation to HIV-related risk throughout the continent (Cowan, Langhaug, Hargrove, Jaffers, Mhurengwe, Searthout, *et al.* 2005; Ghose, Swendeman, George & Chowdhury 2008; McClelland, Graham, Richardson, Peshu, Masese, Wanje, *et al*. 2010). These findings point to the need to further understand the social, behavioural, biological and structural factors that place African FSWs at high risk of HIV infection and establish strategies to reduce HIV transmission in this population (Stefan, Beyrer, Muessig, Poteat, Wirtz, Decker, *et al.* 2012).

The epidemiological histories linking FSWs and HIV/AIDS must be considered in parallel with African nations' social and legal frameworks on commercial sex work. To understand these histories, it is necessary to first recognize that there are two distinct legal frameworks in Africa in relation to sex work. In the first, sex work itself, the exchange of sexual services in kind or for monetary payment and sex work-related activities (i.e. soliciting, facilitating or living off the earnings of prostitution, including brothel ownership and pimping) are illegal. In the second legal framework, sex work is not criminalized, but the procurement and solicitation of sex in public places are illegal. Examples of African countries where sex work and its related activities are illegal include Angola, Equatorial Guinea, Eritrea, Gabon, Ghana, Guinea, Kenya, Liberia, Mozambique, Namibia, Rwanda, Somalia, South Africa, Tanzania, Uganda and Zambia. Countries where prostitution is not illegal but related activities are illegal include Burkina Faso, Cape Verde, the Central African Republic, Côte d'Ivoire, Ethiopia, Lesotho, Madagascar, Malawi, Sierra Leone, Swaziland and Zimbabwe. Senegal is the only African country in which prostitution is both legal and regulated. Registration of sex workers began in Senegal in 1969 when FSWs were also required to have regular health checks and treatment for sexually transmitted infections (STIs) (Ngugi & Steen 2010;: Shannon & Montaner 2012). Currently, there is no African country in which sex work is entirely decriminalized.[1]

The lack of data and the continuing stigma surrounding women who engage in sex work make the provision of comprehensive HIV prevention, care, treatment and support for this vulnerable population particularly challenging furthermore. Currently, 28 African countries lack data on national FSW population estimates. Where data are available, only one-third of FSWs are reported to receive adequate HIV prevention interventions in Sub-Saharan Africa and less than a third have access to HIV prevention, treatment, care and support.[1] Globally, UNAIDS estimates that less than 50% of sex workers have access to HIV prevention programmes (WHO, UNAIDS, UNICEF 2008).

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Table 1. Descriptive statistics of Kibera FSWs and women in other economic occupations.

Question	Female: Sex worker (n = 161)		Kibera women in other occupations: n = 159	
When were you born? (AGE)	M = 30.39 SD = 7.93		M = 29.32 SD = 7.20	
How many years have you lived in Nairobi?	M = 16.93 SD = 9.30		M = 11.16 SD = 9.09	
What was the highest education level that you attained?	None Primary Secondary Post-secondary	100 19 37 3	None Primary Secondary Post-secondary	48 50 55 6
What is your current marital status?	Never married Married Divorced Widowed	116 1 38 6	Never married Married Divorced Widowed	45 78 29 7
How many biological/adopted children have you ever raised?	M = 3.53 SD = 3.13		M = 3.43 SD = 3.05	

Notes: M = mean; SD = standard deviation.

Source: From Ngugi, Benoit, Hallgrimsdottir, Jansson & Roth (2012a)

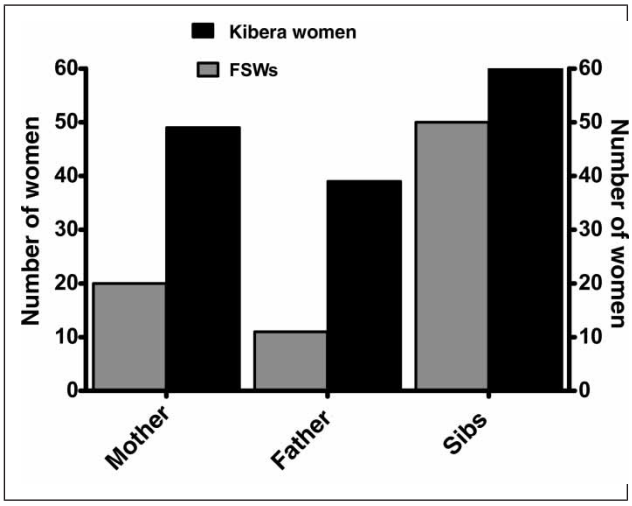

Fig. 1. 'Yes' responses to the question 'Everyone at one time or another needs economic help. In these times who do you think you could go to for money?' (After Ngugi et al., 2012).

HIV surveys amongst FSWs have been conducted previously or continue to be performed in only 19 of 47 Sub-Saharan African countries, and worldwide, two-thirds of the countries lack data on HIV prevalence amongst FSWs (Talbott 2007).

Unlike their peers in other continents, FSWs in Africa are generally not uniformly organized into peer-led organizations such as those established in India and Brazil (Vandepitte, Lyetla, Dallabetta, Crabbe, Alary & Buve 2006). Peer-led organizations providing structural interventions have demonstrated success in increasing female autonomy with respect to epidemiological factors including correct and consistent condom usage (Laga, Galavotti, Sundararaman & Moodie 2010; Talbott 2007; WHO, UNAIDS, UNICEF 2008). The relatively low incidence of HIV and high use of condoms amongst FSWs in Kolkata, for example, have been attributed to a community-led organization called the Sonagachi Project, which engages FSWs in HIV education and advocacy (Laga *et al.* 2010; Vandepitte *et al.* 2006). In summarizing this point further, between 1992 and 1995, the efforts of the Sonagachi Project increased condom use amongst FSWs from 27% to 82%. HIV prevalence amongst FSWs decreased from 11% in 2001 to less than 4% by 2004 (Ngugi, Wilson, Sebstad, Plummer & Moses 1996). In addition, a recent study amongst FSWs in Brazil demonstrated the importance of multilevel interventions that combine HIV and STI services with programmes that modify social structural contexts and challenge the stigmatization of FSWs (Ngugi, Branigan & Jackson 1999).

With very few structural interventions and a paucity of peer-led grass roots organizations, African FSWs remain highly vulnerable to HIV infection. This population is further characterized by extreme poverty and a concomitant lack of familial and social support. The lack of familial and social support and its impact on the lives of FSWs were recently demonstrated in research conducted in the large, informal settlement of Kibera in Nairobi. Here, FSWs were compared with women of the same age also residing in Kibera who reported having never engaged in commercial sex work. As shown in Table 1 and Fig. 1, FSWs in Kibera reported fewer family members at 15 years of age compared with their non-commercial sex worker counterparts. At their current age, the FSWs surveyed reported significantly fewer male and female guardians and a significantly earlier age at last contact with guardians. As a result of these kinship disparities, FSWs in Kibera reported fewer opportunities to borrow money from family members such as mothers, fathers and siblings at times of financial need and crises (Luchters, Chersich, Rinyiru, Barasa, King'ola, Mandaliya, *et al.* 2008).

The compelling intersection of poverty and a lack of familial, legal and economic support also leaves African FSWs highly vulnerable

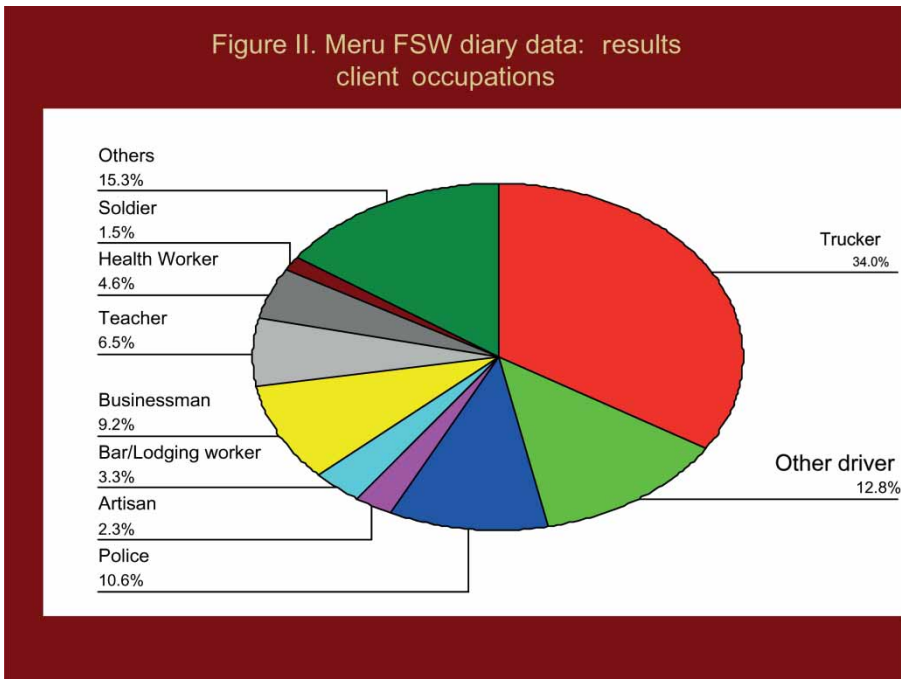

Fig. 2. Occupations of clients.
Source: Meru Source: E. Ngugi, A. Ferguson, C. Morris 2005.

to gender-based violence and coercion. This vulnerability is most directly exemplified by male clients offering FSWs more money to abstain from using condoms (Karim, Karim, Soldan & Zondi 1995; Ngugi, Benoit, Hallgrimdottir, Jansson & Roth 2012b). In a multi-site Kenyan survey of FSWs, 17% reported assault in the previous month and 35% reported being raped by male clients (Kavembe, Mapatano, Busanqu, Nyandwe, Musema, Kibungu, *et al.* 2008). Reports from other parts of Africa exhibit similarly high levels of violence against FSWs (Adu-Oppong, Grimes, Ross, Risser & Kessie 2008; Ntumbanzondo, Dubrow, Niccolai, Mwandagalirwa & Merson 2006) and confirm that sex workers operate in environments of poverty, violence and coercion (Elmore-Meegan, Conry & Agala 2004). The lack of legal recognition and safeguard of FSWs in Africa exacerbates these phenomena.

In the following sections, we propose several ways to address the connections between epidemiological, socio-economic and legal factors that characterize African FSWs today. In doing so, we make no claims that the pathways proposed can solve all, or any, of these serious problems, but rather we wish to shed light on these connections in the hopes of generating discussion about building and initiating more effective and more health interventions for African FSWs.

Data gaps and ways forward

We start with the most basic recommendation that Sub-Saharan African nations conduct surveys to estimate the number of FSWs in their country and endeavour to include FSWs in national HIV surveys and then proceed further and include sex work and HIV/AIDS in the country's strategic plan. While appreciating the fact that 'women sometimes mix sex work with other economic activities and move in and out of it over time', the importance of having at least a working estimate of the size of the national FSW population and their serostatus is highlighted in the finding that 'it is the number of infected sex workers in a country that is highly significant and robust in explaining HIV prevalence levels across countries'. The inclusion of FSWs in national HIV surveys, however, requires a concurrent shift in societal attitudes and national policies to safeguard FSWs and mitigate the stigma and oppression experienced by this population.

Understanding the characteristics of FSWs alone is not sufficient. It is imperative to characterize the male clients of FSWs. As demonstrated by Fig. 2, the occupations of male clients as recorded in the diaries of Kenyan FSWs (Wechsberg, Luseno, Lam, Parry & Morojele 2006) run the gamut from a casual labourer to a police officer. These data demonstrate that sex work involves men from all socio-economic strata. While recognizing that globally male clients 'are hard to count' (Lowndes, Alary, Gnintoungbé, Bédard, Mukenge, Geraldo, *et al.* 2000; Okal, Chersich, Tsui, Sutherland, Temmerman & Luchters 2011; Rekart 2005; Wechsberg, Parry & Jewkes 2008; Weir, Pailman, Mahlalela. Coetzee, Meidany & Boerma 2003; Wojcicki 2002a, 2002b), the inherent difficulties in identifying, let alone counting, male clients has resulted in highly innovative approaches including intercept surveys. More recently, the focus on particular venues where rates of HIV transmission are high (Carael, Slaymaker, Lyerla & Sankar 2006; Okal *et al.* 2011; Rekart 2005) has provided great promise in identifying both FSWs and their clients in order to characterize and provide focused services to these populations. Throughout Sub-Saharan Africa, research indicates that venues where HIV transmission rates are high include neighbourhood bars where FSWs often meet their male clients (Gomes do Espirito Santo & Etheredge

2002; Lewis, Garnett, Mhlanga, Nyamukapa, Donnelly & Gregson 2005; Li & Stanton 2010; Sandøy, Siziya & Fylkesnes 2008; Weir, Tate, Zhusupov & Boerma 2004) and where alcohol use fuels high-risk sexual behaviours. In addition to sex and alcohol, public drinking establishments in Africa are also associated with gendered violence (Lewis *et al.* 2005; Li & Stanton 2010; Sanday *et al.* 2008; Weir *et al.* 2004). By focusing on such venues, the relationship between alcohol, high-risk sexual behaviours and gender-based violence, all of which characterize African sex work, could be further explored and intercepted. Particularly relevant is Rhodes' model of risk environments (Chersich, Luchters, Malonza, Mwarogo, Kingola & Termmerman 2007; McClelland, Wanje, Kashonga, Kibe, Scott McClelland, Kiarie, *et al.* 2009) which encompasses all three factors at an individual, contextual and societal level. Such a perspective can be fruitfully pursued within a harm reduction framework to examine the means of reducing FSWs' vulnerability to high-risk sexual behaviours and violence (Chersich *et al.* 2007; Fisher, Cook & Kapiga 2010).

A focus on public drinking establishments also allows for the inclusion of male clients of FSWs in research and intervention programmes. Epidemiological studies have identified the importance of male clients as 'bridge populations' (Lowndes, Alary, Meda, Gnintoungbé, Mukenge-Tshibaka, Adjovi, *et al.* 2002) linking groups at high risk of HIV infection such as FSWs and lower risk groups such as girlfriends and wives (Morojele, Kachienga, Mokoko, Nkoko, Parry, Nkowane, *et al.* 2006). Male clients may even function as 'core groups' maintaining high HIV/STI prevalence levels because of multiple FSW partners (Morojele *et al.* 2006). More recently, research has attempted to understand the diverse relationships amongst men who buy sex. In some instances, the interaction between the male client and the FSW begins as a commercial transaction, but sometimes this develops over time into a romantic relationship (Aral 2000; Rhodes 2002, 2009; Voeten, Egesah, Varkevisser & Habbema 2007; Wojicicki 2002). Such transitions have important epidemiological and economic consequences. In the first regard, romantic or intimate partners are far less likely to use condoms (Karandikar & Próspero 2010; Luke 2006), which throughout Africa are viewed as barriers to intimacy and sexual trust (Robinson & Yeh 2011; Swidler & Watkins 2007). Notwithstanding this, economically, romantic partners can make substantial contributions to FSW household economies, which can impact important epidemiological variables such as the number of sexual clients (Chimbiri 2007; Murray, Moreno, Rosario, Ellen, Sweat & Kerrigan 2007; Stoebenau, Hinden, Nathanson, Rokatoarison & Razafintsalama 2009). In a recent analysis of FSWs in Kenya, FSWs with intimate partners reported significantly fewer sexual partners in the week prior to the interview (mean number of partners = 3.1, SD = 5.6) compared with FSWs who did not report a current intimate relationship (mean number of partners = 6.6. SD = 9.20). FSWs in romantic relationships also reported fewer sexual partners not using condoms (mean number of sexual partners not using condoms = 0.9, SD = 4.0) relative to FSWs without a current romantic partner (mean number of sexual partners not using condoms = 2.2, SD = 7.4). The impact of a romantic relationship on condom use and the number of sexual partners was greater than the impact of a microfinance programme intended to empower FSWs in Nairobi (Vuylsteke & Jana 2001).

Considering male clients and romantic partners in addition to FSWs provides a broader, more complete picture of the dynamics of sex work. The inclusion of romantic partners of FSWs recognizes the role of FSWs in familial units, specifically, the role of FSWs as mothers and the impact of commercial sex work on their children and families. An important consideration is the issue of child care for the children of FSWs. A study of the child care practices of FSWs in Kenya reported three common practices: first, mothers socialized girl children into the sex trade; second, mothers locked their children in their homes at night when they were seeking male clients; and third, alcohol use amongst FSWs resulted in child neglect (Chege, Kabiru, Mbithi & Bwayo 2002; Ngugi, Benoit, Hallgrimsdottir, Jansson, Roth, 2012a; Odek, Busza, Morris, Cleveland, Ngugi & Ferguson 2009; Roth, Ngugi & Janssen 2011). These practices elaborate the need for FSW-centred child care. However, a recent review of such programmes targeting injection drug users (IDUs) and FSWs identified multiple child care programmes targeted at the children of IDUs but only one focusing on the child care needs of FSWs (Onyeneho 2009).

Finally, we recognize the roll-out of anti-retroviral drugs in many African countries and the call for a programme of 'positive health dignity and prevention'(Beard, Biemba, Brooks, Costello, Ommerborn, Bresnaran, *et al.* 2007). However, few studies focus on the impact of such a programme on the sexual behaviour of African FSWs. A notable exception is a recent study with FSWs in Mombasa which demonstrated a lack of Treatment Optimism as evidenced by no increase in clients while on treatment (Odek *et al.* 2009).

Ethnographic research considering HIV serostatus as yet another factor for FSW stigma and discrimination may shed light on the range of economic and moral options open to HIV-positive FSWs living in poverty (Onyeneho 2009).

Additional risk factors

- Additional risk factors for HIV in Africa include migration and rape (Sudan 2009; Beard *et al.* 2007).
- According to UNAIDS, few countries outside Latin America have national social protection systems and large-scale coverage. The publication further states that social protection systems are especially limited in Sub-Saharan Africa (Onyeneho 2009). In the absence of this support in the general population, it cascades to sex workers who might be HIV positive still working without education and 100% condom use.
- There is also evidence from Dominican Republic (Kalichman 2006) that environmental–structural factors bring about significant and consistent condom use amongst FSWs; while this finding is outside Africa, it serves to demonstrate that the strategy works. The Continent of Africa can tailor-make this.
- Another dimension to sex work in Africa is that which is evidenced by UNHCR reports (2007–2008) in several refugee camps in the Horn of Africa, namely Ethiopia,

Djibouti, Uganda and Kenya. This was followed by an implementation guideline manual entitled HIV and Sex Work in Humanitarian Settings: a Guide to Interventions Based on Experience from Eastern Horn of Africa (Halperin, de Moya, Perez-Then, Pappas & Garica Calleja 2009).

- STIs are a risk factor to HIV transmission in particular with female sex workers who have frequent sex partner change.

Proposed research areas

(1) Possible strategies to collect annual size estimates of FSW populations and their male clients. Concurrent methodologies to target destigmatization of FSWs.
(2) Rapid studies to establish how best to provide FSW-appropriate comprehensive HIV prevention, treatment, care and support.
(3) Strategies to effect positive changes in sex worker policies that include FSW HIV prevention, treatment and care as a priority for all African governments.

Conclusion

FSWs remain an important yet often overlooked strategy of the HIV epidemic in many African countries. Often considered to occupy the peripheries of society, both FSWs and their male clients are yet represented in every socio-economic strata in every sub-Saharan country. In Africa, there is a long-established epidemiological perspective viewing FSWs as a population with important public health needs, particularly in light of the African HIV/AIDS pandemic. Increasingly, greater awareness and recognition of FSWs as citizens, wives and mothers are present. In all of these roles, FSWs deserve legal protection and adequate social/health care including highly active antiretroviral therapy for those who are HIV positive.

This essay offers some research suggestions that we hope stimulate discussion around these goals. Included here are national censuses and serological surveys of FSWs, consideration and inclusion of their male partners and clients, a broader theoretical perspective that recognizes the potential harms associated with unprotected sexual practices, substance misuse, gendered violence and the recognition of FSWs first as individuals and second as mothers with needs such as safe child care and as a group with a higher HIV prevalence which requires specialized health and social care as well as monitoring. All of these suggestions are feasible for all African countries, but will require political will and social transformation to succeed.

It is not arguable that these women are displaced and, therefore, more vulnerable to exploitation. They should be part of the equation of understanding more their vulnerability and possible responsive intervention. To strengthen this further, it must be appreciated that camps are within the countries with HIV burden and the refugees interact with the populations of the host countries.

Note

1. 100 Countries and Their Prostitution Policies – Prostitution: This page details the policies of 100 countries on prostitution, brothel ownership and pimping. These countries were chosen in order to be inclusive of major religions, ... prostitution. http://procon.org/view.resource.php?resourceID=000772

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