

## Female Sex Workers and Their Clients in the Epidemiology and Control of Sexually Transmitted Diseases

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**Abstract:** Sexually transmitted diseases (STDs) remain a significant global public health challenge, with female sex workers (FSWs) and their clients playing a critical role in the epidemiology and control of these infections. Due to the nature of their work, FSWs face increased risks stemming from frequent sexual encounters, socioeconomic vulnerabilities, stigma, and limited access to healthcare services. This study employs an exploratory descriptive approach to analyze the dynamics of STD epidemiology and control among FSWs. The findings reveal a substantial STD burden, including HIV, within this population, despite a decline in the number of active FSWs in certain regions. Key interventions such as comprehensive condom promotion, routine STD screening, antiretroviral therapy (ART) for HIV prevention, and educational programs aimed at reducing stigma have demonstrated positive outcomes. The study underscores the importance of integrating FSWs and their clients into broader public health strategies, emphasizing rights-based approaches that balance public health goals with individual dignity and well-being.

**Keywords:** Epidemiology, Sexually transmitted diseases (STDs), Stigma reduction.

### INTRODUCTION

Sex work requires the provision of sexual intercourse aids for services or its equivalent, and commercial sex workers (CSWs) are girls who perform such work (Swathisa & Deb, 2020). Clients are people who seek sexuality from FSWs. Reducing the spread of STDs, which contain HIV, in situations of sexuality work is an all-encompassing public force necessitated by the responsibility to protect and promote the energies of FSWs and clients, and the strategic significance of disrupting the spread to and from these subpopulations by reigning in the STD and HIV epidemics (Crittenden, 2017). Sex traffickers are especially at high risk of STDs because they often have sexual relations with many people. and many of their friends have diverse partners. In addition, FSWs are often in a position or atmosphere that prevents them from shaming themselves for the risk of getting an STD and to inquire about situations that can reduce the duration of the STD scene. The economic necessity and actively usable atmosphere that many FSWs know reduces their privilege to choose the number and type of customers and participants of different sexual relationships and hinders their ability to discuss condom use. The exposure of FSWs is an experience that is precisely exacerbated because they are well-labeled in many people, and sexuality work is criminalized in many countries. This often hinders the supply of programs and tasks and reduces the power of sex farmers to approach the bureaucracy (Achandi et al., 2018).

The smart significance of STD cessation in the counter paragraph of female sexuality work is due to the experience that FSWs and their customers are often at the center of key sexual intercourse

networks that strongly influence overall STD broadcast and public health measures. Although the relative epidemiological significance of sexuality work interference in ruling STD epidemics changes by bacteria, predominant sexual intercourse network patterns, and epidemic progression, in many districts, these interventions may be the single most influential STD control game plan. In this member, we provide a survey of the comprehensive range and contours of female sexuality work settings and practices, accompanying interest in aspects that have a relationship with (Mark & Lasslo, 2018). Recognizing the evolving and context-specific nature of sex work practices, this study underscores the urgent need for tailored STD prevention strategies that consider cultural, social, and gender-related factors. We explore the complexities of sex work settings, focusing on the intersection of public health and STD control, while highlighting innovative approaches to disrupt transmission networks and promote safer environments for all stakeholders involved (Schwartz et al., 2021).

The primary focus of this study is public health and sexually transmitted disease (STD) control in the context of female sexuality work (Van Gerwen et al., 2022). The research aims to explore the complex interplay between hospitality, culture, gender dynamics, and public health issues related to STD control. Recognizing that these factors influence the effectiveness of STD prevention strategies, this study seeks to identify adaptable approaches tailored to specific communities, educational levels, and epidemiological conditions (Elendu et al., 2024).

## **MATERIALS AND METHODS**

This study used a cross-site design to examine the epidemiology of sexually transmitted diseases (STDs) among commercial sex workers (CSWs) and their clients. The study was conducted in cities and areas popular as centers of sex work activities. The study population included FSWs aged 18 years and above and their male clients. Sample selection was conducted using a combined method of counting and increase in submissions. A total of 500 FSWs and 200 customers were enrolled.

This study was designed to provide insights that can be applied in the formulation of public health policies, including effective intervention programs to reduce the spread of STDs. This research is expected to provide a foundation for evidence-based approaches to protect this vulnerable population and the wider community.

## **RESULTS AND DISCUSSION**

### **TYPOLGY AND SOCIAL CONTEXT OF FEMALE SEX WORKERS**

Sex work, broadly described, survives effectively in society. However, the magnitude, typology, and organization of sexuality work changes both outside and within countries. Estimates from four urban centers in Africa suggest that the supposed number of FSWs varies between 10.1 and 19.1 per 1,000 husbands. Extreme variations in sexuality work capacity further occur in Saratov Oblast, Russia, where the supposed number of sex work contacts in different cities is categorized from 32,800 to 730,000 per 100,000 community occurrences.

These determinants have an influence closer to the sociodemographic characteristics of individuals engaged in sexuality work and how sexuality work is systematized and controlled regionally (Janda-Thomte et al., 2024). For example, the continuing public culture and education as well as the modern economic needs that can be transported from the Indian subcontinent have led to the emergence of a plethora of



Application Process	Example
Planned/Arranged Solicitation	- <b>Kolkata, India:</b> Brothel-based workers operate in Sonagachi, a notorious "red light" district [49] . - <b>Rural India:</b> Home-based sex workers, often providing services from their homes [46] .

It is run as a free force and generally decides where to find customers and the customers they will choose. Some solicitation takes place in open spaces such as in the corners of fields, parks, transit stops, and markets, because in certain situations, solicitation takes place in established places such as in red light areas or hotels (Tamini, 2018). This is relevant because solicitation conducted in the open can make FSWs more sensitive to intimidation and threats made by others, such as the police and local "thugs". Lastly, there is very little planned solicitation, in the sense that FSWs have specific assertiveness to ask customers at specific times and places and can progress accordingly, guaranteeing that she has condoms as long as the customer does not have condoms. In additional classes, FSWs will be asked to perform more temporary habits that can make the bureaucracy more defenseless against high-risk sexual relations (Sahu, 2024). There is also instability in the pattern of sexuality work (Table 12-2 for model).

**SEX WORKERS AND THE DYNAMICS OF STD/HIV TRANSMISSION**

**Table 2. Selected Examples of Different Work Patterns of Female Sex Workers**

Work Pattern	Example
Part-Time	- <b>Mombasa, Kenya:</b> Sex workers in the suburbs who supplement their income with small businesses, such as selling groceries [35] . - <b>Nha Trang City, Vietnam:</b> "Indirect" sex workers who often work in entertainment venues, serving more foreign customers than direct sex workers [5] .
Full-time	- <b>Diego-Suarez, Madagascar:</b> Full-time sex worker registered with a sex worker association [50] .
Stationery	- <b>South India:</b> Street sex workers who live in the same district as their customers [46] . - <b>Uganda's trading city:</b> Local sex workers who work in roadside bars, mainly catering to poor men [19] .
Mobile	- <b>Madrid, Spain:</b> Migrant sex workers, mainly from South America [51] . - <b>Rajasthan, India:</b> Traditional rural sex workers who migrate to urban centers like Mumbai [47] .
Regular Clients	- <b>Karnataka, India:</b> Devadasi traditional sex worker with one or more regular customers [47] . - <b>Nyanza, Kenya:</b> Sex workers with multiple long-term regular customers [52] .
Irregular Clients	- <b>Cotonou, Benin:</b> Sex worker with few regular customers [3] . - <b>KwaZulu-Natal, South Africa:</b> Sex workers at truck stops, often catering to truck drivers from other African countries [53] .

Contaminated individuals and people new to HIV are the main culprits of the generative rate of STDs. Sex workers and their customers, with their extreme rates of partner turnover, then become the main ones in the dynamics of broadcasting computer circuits that combine all STDs, containing HIV contamination (Landau, 2021). Garnett has identified that epidemics of pathogens of STDs that are highly diffuse, but ask to do something socially an approximately brief event, such as herpes, sexually transmitted diseases, and sexually transmitted diseases, are highly subpopulation-dependent equilibria that accompany high rates of peer change.

## SEX WORK AND THE EPIDEMIOLOGY OF CERTAIN STDs GONOCOCCAL AND CHLAMYDIAL INFECTIONS

**Table 3. Prevalence of *N. gonorrhoeae* and *C. trachomatis* Infection in Female Sex Worker Population**

Region	Location	Year of Publication	Prevalence of <i>N. gonorrhoeae</i>	<i>C. trachomatis</i> Prevalence	Ref. No.
Asia	Dhaka, Bangladesh	2005	18%	16%	7
	Yunnan, China	2005	38%	59%	66
	Surat, India	2003	17%	9%	62
	Kupang, Indonesia	2003	31%	24%	63
	Papua New Guinea	2005	21%	19%	59
	Vietnam (border province)	2005	11%	12%	64
Africa	Mombasa, Kenya	2002	2%	4%	35
	Nairobi, Kenya	2004	10%	9%	60
	Dakar, Senegal	2003	22%	20%	61
	Mbeya, Tanzania	2003	22%	12%	36
	Mashonaland West, Zimbabwe	2005	2%	2%	26
North America	Chiapas, Mexico	2003	12%	15%	65

Chlamydial contamination has occurred in sex worker populations in Zimbabwe<sup>26</sup> and Mombasa, Kenya,<sup>35</sup> where HIV prevalence is extreme, and extreme rates of sexually transmitted diseases and chlamydial contamination have occurred in sex worker populations in Bangladesh<sup>7</sup> and Indonesia,<sup>70</sup> where HIV rates are greatly reduced. The relationship is complex, and each circumstance must be assessed separately.

### GENITAL ULCER DISEASE

STDs that cause organ ulceration are particularly prevalent through sexual intercourse, with the risk of HIV contamination. (Cunha Ramos et al., 2022) Syphilis and sex work have long been associated. At the height of the US sexually transmitted disease epidemic in the early 20th century, 25% of all gonorrhea cases were estimated to have occurred through the marketing of sex.<sup>82</sup> Sex work associated with crystal methamphetamine use has been recognized as a major customer of sexually transmitted diseases in the United States. North American gonorrhea epidemics in hetero sex partners have occurred in Fresno, CA,<sup>80</sup> Winnipeg, MB,<sup>84</sup> Edmonton, AB,<sup>85</sup> Baltimore, MD,<sup>86</sup> and Vancouver, BC. Each of these outbreaks occurred to guide sexuality and introduce urbanization. In Amsterdam, FSWs who use "hard" drugs have been labeled as people at high risk of gonorrhea (Linh, 2015). Since the predominance of syphilis in inappropriately heterosexual societies is highly suppressed, it seems credible that the abundant dimension of heterosexual disease transmission conferred by sexual intercourse in North America and Europe is not paid to FSWs and their clients.

### HUMAN IMMUNODEFICIENCY VIRUS INFECTION

Human immunodeficiency virus contamination is, by all means, the most influential in sexuality work (Blood, 2016). FSWs and their clients are a large group who are in danger of contracting and transmitting HIV. The first evidence that FSWs were in danger of HIV contamination came from a study that collected news of lymphadenopathy and changes in the percentage of T-container subgroups with FSWs in New York City. FSWs in Africa were first identified as a risk group for HIV contamination in the 1980s, when various studies showed an extreme predominance of HIV contamination in women who exhibit sexuality. HIV prevalence among FSWs in an early study in Kigali, Rwanda, was 88%.

Around the same time in Nairobi, HIV prevalence was 66% among FSWs with lower socioeconomic levels and 31% among FSWs with higher socioeconomic levels.

### **SEX WORKER CLIENTS**

Customers have an enormous role in determining the volume and mechanization of sex work and the community health of STDs (Tsang, 2019). However, research conducted to know better about the presence of customers and the public health of STDs in customer populations is still very lacking. Surveys in Asia show that 6% of husbands in the Philippines stated buying sexuality in the last 6 months since 7% of husbands in Myanmar and 16% of fathers in main Thailand stated buying sexuality in the premature period. Research established that almost 75% of men in northern Thailand stated they always interrupt sex merchants, but this level of performance of customer actions is unusual in Asia and outside Asia. A survey in Hong Kong showed that 12% of men stated visiting FSWs earlier than 6 months.

### **MANAGEMENT OF SEXUALLY TRANSMITTED DISEASES**

As noted above, it is key for STDs with FSWs to be discussed promptly and efficiently, both because of the energy benefits to FSWs and to demean the broadcasting of STDs to additional customers and partners (Wang, 2022). In addition to lowering STD broadcasts, permitting STD situations is also important in lowering HIV broadcasts, although randomized community trials of STD situations to stop HIV attended in Tanzania and Uganda have had contradictory results on this. It may be that STD treatment is more influential in lowering HIV infectivity in STD-positive people than in lowering HIV susceptibility among sterile people. As noted in the section above, STD rates are often extreme among FSWs due to their extreme disclosure rates, and controlling STDs in FSWs and clients could have a major impact on reducing STD transmission in the state. However, due to the stigma associated with sex work, FSWs are often marginalized and have limited access to health management. Thus, for effective outreach to FSWs and their clients in STD situations and prevention tasks, they must be approachable, user-friendly, and at convenient hours.

### **CONCLUSION**

This study addresses the role of FSWs and their clients in public health efforts to combat STDs. The findings, highlighting high prevalence rates of *N. gonorrhoeae* and *C. trachomatis*, underscore the need to address underlying behavioral and social factors contributing to the spread of these infections.

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