

Perception and Practices of Female Sex Workers towards Sexually Transmitted Infections in Greater Cairo, Egypt

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Abstract

Objective: to study the perception and practices of sexually transmitted infections among female sex workers in Greater Cairo. **Methods:** A cross sectional study including 431 of female sex workers. **Results:** 77.3% of participants knew about STIs. The majority (70.3%) claimed refusing sex in presence of STIs. However, unusual vaginal discharge last year was reported by 76.1% of participants, and genital ulcers by 15.5%. Only 40.1% informed their partners if having STIs and 63.1% claimed immediately starting treatment either from private or governmental facilities (45.9% and 33.6%, respectively). AIDS was known by 92.8% of participants while only 9.3% ever attended a raising awareness session. Correct methods of infection were known by 64.3% for breast milk, 78.4% from mother to her baby and 76.3% for sharing needles. Having one faithful partner, abstain from sex and proper use of condoms were the main preventive measures reported by participants (54.8%, 54.8% and 40.4%, respectively). Only 31.3% accepted taking care of an infected friend. Confidential counseling and testing for HIV was known by 57.1% but only 8.4% performed the test. **Conclusion:** The majorities of participants were knowledgeable about STIs and still had some misconceptions and a negative attitude towards people living with HIV. Key message: The paper addresses an issue for which limited information is available in our region due to illegal pattern of sex working. In many low prevalence countries the HIV epidemic is usually fueled by spread in most at risk population as sex workers before it turns to a generalized epidemic. The perception of HIV and STIs risk among sex workers is important to stimulate them to adopt harm reduction policies which can protect them and community from STIs including HIV infection.

Keywords: *Female sex workers, AIDS, Sexually transmitted infection.*

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Introduction

The practice of commercial sex is something identified in all societies throughout history. According to the report by the Joint United Nations Program on HIV-AIDS (UNAIDS) there are approximately 35.3 million people

infected with HIV worldwide. This report emphasized that female sex workers (FSWs) are one of the groups at the greatest risk of acquiring and transmitting sexually transmitted infections (STIs) and human immune-

deficiency virus (HIV).¹ The World Health Organization (WHO) reported that sexual transmission is responsible for over 75% of new HIV infections occurring globally. The WHO report highlighted that FSWs and their clients had a higher risk of contracting STIs/HIV. This is due to the extensive number of sexual encounters and to the factors directly or indirectly related to commercial sex situations. The WHO report also stated that FSWs who work illegally are the population group most susceptible to this infections.² Nevertheless, there is also evidence suggesting that debt dependency, low pay and poor living conditions may jeopardize the health and safety of FSWs. It was reported that when FSWs have control over their own working situation and insist on safer sex relations, the risk of and vulnerability to STIs/HIV could be significantly reduced.³ Risk perceptions is a complex multifactorial process built on the experiences that a person undergoes during the course of his or her life which are directly or indirectly influenced by socioeconomic, political and cultural contexts.⁴ Worldwide female sex workers are considered a risk group for heterosexual spread of immunodeficiency virus.⁵ Sexually active young persons are the main sector in the communities affected by sexually infectious diseases including HIV. STIs and HIV and its complications ranks in the top five disease categories for which adult seek health care in developing countries.⁶ Causes behind elevated rates of STIs and HIV are complex. The main reasons include biological factors, risky sexual behavior pattern, transmission dynamics and treatment seeking behavior.⁷ Comprehensive and correct knowledge about STIs including HIV among both

young men and young women has increased slightly since 2008 but still there is effort to be done to improve knowledge and behavior.⁸ Extensive levels of misconceptions and misinformation regard HIV/AIDS are present in Middle East and North Africa⁹ Sexually transmitted infections (STIs) can be markedly reduced by having correct knowledge about methods of transmission and prevention of HIV, regular and correct use of condom as important tool for any successful STIs/AIDS control program.

Materials and methods:

Study setting: A cross-sectional study was conducted in Greater Cairo that includes three Governorates namely, Cairo, Giza and Qualiobia. These governorates accommodate a population of nearly 18.5 millions according to latest census data.¹⁰

Sample size and sampling technique: Target population was FSWs representing different categories as identified by focus group discussions (FGDs) with FSWs. Results of FGDs identified the different categories of FSWs and the main places of their gathering. Information gained from Al-Shehab Non –Governmental Organization working with sex workers validated the same information. Main categories of FSWs working in Greater Cairo were Streets, Bars and night clubs, Dancers, Brothels, Coffee shops and discotheques and Hotels.

Sample size was determined to be 384 based on estimated level of knowledge ranging between 50-55% of ideal with 95% confidence limit and 80% power of the study. The sample size was increases to 431 to increase validity of results and compensate for non response. Researchers prepared a list of places

where sex workers tended to gather based on information gained from FGDs and categorized by the different identified categories of sex workers. For each category, the suitable timing for visiting the gathering place was identified to ensure cooperation of the study subjects and avoid interfering with their work needs.

A time location sampling technique was used for data collections. One place for each category was randomly selected and all available sex workers at the time and place were interviewed by data collectors. The process was repeated and another set of places were randomly chosen and visited until the desired sample size was obtained. The researchers did not succeed to get approval from hotel managers to conduct fieldwork there, so sex workers at hotels were not included in the study. In addition, brothel based sex workers were not included due to lack of safety for data collectors during the interviews.

Data collection methods and tools: A questionnaire sheet was used to study the behaviors of FSWs. This questionnaire was adapted from the questionnaire published by family health international.¹¹ Necessary modifications were made to make it suitable for the situation of sex work in Egypt. The questionnaire sheet included questions covering background characteristics, Marriage, family and work, sexual history: Age in years of first time selling sex, duration of sex work in years, Information about paid/unpaid sexual partners.

A pilot study was conducted in order to test the questionnaire to ensure its suitability for data collection. Data collection was performed through direct interviews with study subjects by trained interviewers from Al-Shehab

Organization, which had long experience working with sex workers on different issues related to prevention of HIV infection and providing social and legal support.

The collected data were organized, tabulated and analyzed using SPSS (Statistical package for social studies) version 21 (IBM Inc., Chicago, Illinois, USA). For quantitative variable, the mean and standard deviation were calculated. For categorical variable, the number and percentage were calculated.

Ethical considerations: Data collection was anonymous. Confidentiality was ensured during the whole study period where no data were linked to names or specific persons. No pressure of any kind was used for recruitment of the study subjects. Witnessed verbal consent was taken before the interview. The data collectors explained the study objectives and content of the questionnaire before starting data collection. The ethical permission for the study was taken from Ministry of Health and IRB of Tanta Faculty of Medicine.

Results:

The total number of studied sex workers was 431. Out of them 52.7% were less than 30 years of age with a mean age of 29.38 ± 9.48 and a median age of 27 years. Those who attended schools represented 60.8%. Nearly one half (49.2%) had completed primary education while only 19.1% completed university education with a mean of 10.18 ± 3.24 years of education. Those who ever or were currently married during the study period represented 65.9%. Living accommodation was with family among 41.3% followed by living with husband (36.7%). Those who depended solely on sex work for living represented 39.9%. On the other hand, 53.8% reported

having other jobs. Nearly 40% admitted alcohol intake, which was reported to be daily by 7% and occasionally by 32.9%. Drug intake was reported by 49% which was mostly hashish (96.2%) and 37.6% of drug intake was reported to be associated with sexual practices. Drug injection was reported by 5.6% during last year. (Table 1)

STIs were known as a group of diseases by 77.3% of study subjects. Bad odour vaginal discharge (83.1%) and unusual vaginal discharge (75.9%) were recognized as STIs manifestations followed by genital itching (71.7%), genital ulcers (45.0%) and burning sensation during urination (41.3%). Manifestations of STIs among men were reported as urethral discharge (74.2%), genital itching (63.1%), and burning sensation during urination (48.3%) and genital ulcers (45.7%). The main action taken by sex workers with a client suffering from STIs was refusal sex (70.3%). On the other hand, 17.4% reported practicing sex with infected partner without using condoms. Sex workers who suffered from unusual vaginal discharge last year represented 76.1% and 15.5% suffered from genital ulcers. Infected sex workers used to inform partner about being suffering from STIs as reported by 40.1% while 42.5% never did. Those who stopped working until taking appropriate treatment represented 35.3% while 13.9% reported continuing working without using condom. Infected sex workers with STIs usually start treatment after few days of manifestations (63.1%) while 14.8% were never interested in getting treatment. The preferred source for STIs treatment was private clinics or hospitals as reported by 45.9% followed by

governmental hospitals (33.6%) and pharmacies (20.9%) (Table 2).

A high percentage of participants (92.8%) had some information about HIV and AIDS. Only 9.3% reported attending a raising awareness session about HIV infection. Only 16.7% reported knowing a person living with HIV and only 5.8% reported knowing a friend living with or died from HIV infection. Sharing infected needles, vertical transmission and breast milk were recognized as sources for HIV infection by 76.3%, 78.4% and 64.3%, respectively. However, misconceptions associated with HIV infection such as insect bites and sharing food were reported by 29.7% and 30.2% of participants in this study. Having one faithful healthy partner and abstaining from sex were reported as methods for prevention of HIV by 54.8% each. Proper condom use as a method for prevention of HIV was reported by 40.4%. Apparently healthy persons were recognized as possible source of infection with HIV by 44.8%. Very few participants were willing to share food with a person living with HIV (PLHIV) (18.6%). A minority accepted to have sex without or with use of condom with PLHIV (1.9% and 7.4%, respectively). Nearly one third only accepted to take care for a friend living with HIV (31.3%), buy grocery from infected person (26.9%) or continue meeting a friend living with HIV (33.6%). More than one half (57.1%) knew about confidential counselling and testing services but only 8.4% ever been tested for HIV. The majority of them (97.2%) were tested on voluntarily basis and were informed about their test results. Most of those tested performed the test during the last year (86.1%) (Table 3).

Discussion

Because of high infection rates and large numbers of sexual partners, sex workers were considered a core group for the transmission of HIV and other sexually transmitted diseases. In addition, commercial and non-commercial FSWs play a major role in transmitting HIV and other STIs infections into the general population. These “bridge” populations may be as important as core groups in direct prevention programs.¹² The majority of participants in the present study were of middle age groups (20-40 years). This middle age group was the most frequently encountered among sex workers, which is considered the age of sexual attractiveness and sexual activity.^{13,14} This age group is most frequently affected by HIV/AIDS and other sexually transmitted infections.¹³⁻¹⁵ A study in Morocco showed that 67% of reported cases of HIV infections were among FSWs, their clients and their steady partners.¹⁶ In the present study, nearly one-half of participants completed primary education and only, about one-fifth of them completed university education. Education plays a role in occurrence of STIs and is considered a key defense against the spread of STIs. Lower level of STIs/AIDS infection was encountered among better-educated people. Higher education levels were linked with increased STIs/AIDS awareness and knowledge, higher rate of condom use and greater communication on STIs prevention among sexual partners.¹ The majority of participants in the present study were ever or currently married during the study period. This observation is similar to what was observed in similar studied in Middle East region.¹⁷ Different studies among FSWs showed that in spite of marital status the majority of them and their

husbands were having extramarital temporary or permanent sexual relationships. This unpaid sexual relations act as bridges for transmission of sexual diseases infection from FSWs to other sectors of the community.¹⁴⁻¹⁶ In the present study, living accommodation was mainly with families. The strong social relations of Egyptian families could explain this. In contrary to western countries, the tendency of adults to live separately from their families is not common in Egypt. In the present study, more than one half of participants were having other jobs and are not working exclusively as sex workers. In conservative countries like Egypt, FSWs tend to have another job as a safe cover against the high social stigma against sex working.^{18,19}

As regard risk factors, which influence the occurrence of STIs/AIDS, less than one-half of participants in the present study reported alcohol intake and drug abuse. Addiction status played a role in the occurrence of STIs. UNAIDS reported a high rate of STIs including AIDS among drug abusers (35-80%). In addition, drug injection has an intimate relation with occurrence of HIV infection. Drug addicts may also have multiple sexual partners.¹ However, in another study, in Mexico, risk factors associated with probability of sexually transmitted infections were, lack of condom use, years of commercial sex work and illiteracy.²⁰

The majority of our participants were knowledgeable about STIs with different level of knowledge about manifestations among males and females. Different studies showed different knowledge of FSWs concerning STIs. A study among street sex workers in Eastern Europe showed that almost all the street sex workers were aware of AIDS but far less

of other STIs.²¹ The increased exposure to various media including electronic media, people have fair to good knowledge about mode of transmission and manifestations of STIs.²² The majority of our participants were able to recognize STIs manifestations among male partners and the main reported action taken was refusing sex practice with men showing manifestations of sexually transmitted infections. One the other hand, participants in the present study reported high incidents of having manifestations suggestive for sexually transmitted infections among them including abnormal vaginal discharge and genital ulcers. It seems that their claims of refraining from sex if the client was infected may not be true. In the present study many sex workers did not abstained from sex and did not inform their partners. It seems logical that women in the sex industry would be unlikely to readily identify abstinence as an important prevention activity, as commercial sex is their primary or the only source of income.

The vast majority of our participants reported starting to seek treatment for STIs manifestations few days or within two weeks of appearance. However, this information is self-reported and cannot be validated. It also contradicted with the observation in the present study of high percentage of participants reporting ever having manifestations suggestive for genital tract infections last year. Preferring of private sector for treatment observed in the present study may be attributed to more confidentiality, privacy at private sector or fear of stigma. This agreed with the study of Mohebbi, 2006, which reported that, FSWs sought treatment for STIs through self-treatment or through friends rather than through knowledgeable health

personnel.²³ Sex workers in Middle East and North Africa continue to suffer from unavailability of medical and support services and continue to fear pursuing such services due to social stigmatization, marginalization, and law enforcement.^{9,17}

Although condom is being promoted as a major protection against transmission of STIs/AIDS, only 8.6% of FSWs participating in the present study used condom to prevent transmission of STIs. A baseline survey among sex workers in Cross River State in Nigeria showed that 11% only of sex workers always used condoms.²⁴ A study among Indonesian sex workers showed that condom use was related to knowledge and work location.²⁵ Elevated knowledge and working in higher economic levels were associated with higher condom use. Condom use was significantly associated with beliefs about condom ability to prevent STIs/AIDS, pregnancy, enhancing sexual pleasure and self-efficacy.²⁵ A study in Egypt showed that More than two-thirds of the sample (69.6%) reported availability of condoms in their neighborhood. However, 53.1% reported that they would be embarrassed to buy condoms.²⁷ In the present study, the majority of sex workers heard about AIDS and its modes of transmission. However, some misconceptions were observed. There is a high level of misinformation and many misconceptions about HIV/AIDS in Middle East and North Africa (MENA).⁹ The present study showed that the majority of the participants had correct knowledge about means to avoid HIV/AIDS. Similar findings were also reported in a study on sex workers in Mangolia²⁸ and Nigeria.²⁶

Concerning, attitude towards people living with HIV, most of our participants

had negative attitude and refused to deal with them. It seems that the negative attitude of studied FSWs towards people living with HIV is reflection of the prevailing negative attitude among the general population in the community they live.¹⁷ The attitude towards infected person with HIV also depends largely on the social acceptability of mode of transmission a person get infected.³⁰

A slightly more than half (57.1%) of our participants knew about confidential counseling and testing. However, few of them ever had HIV testing in the last year. This may be attributed to lack of knowledge about importance of early testing. HIV Testing is influenced by complex interplay of personal risk perception, social relationship and community disclosure. In addition, HIV treatment and testing may be hampered by high cost of treatment, judgmental attitude of service providers and lack of information on testing services.³⁰ However a study in Netherlands revealed that, 82% of all commercial sex workers reported a prior HIV test and 2% of them were positive.⁵

Limitations: the present study was not able to include sex workers of two of the identified categories due to budget limits and safety issues. The practices in the present study were self reported. The researchers cannot ensure validity of self-reported data.

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Table (1): Sociodemographic characteristics of the studied female sex workers

Characteristic	No. (n=431)	%
<i>Age (years)</i>		
< 20	44	10.2
20–	183	42.5
30–	98	22.7
40–	51	11.8
50–	18	4.2
Unrecorded	37	8.6
<i>Education</i>		
Attended school	262	60.8
Duration of education (<i>n</i> = 262)		
Primary (1–9 years)	129	49.2
Secondary (10–12 years)	83	31.7
University	50	19.1
Ever married	283	65.9
<i>Living with:</i>		
Husband	158	36.7
Male sexual partner	20	4.6
Female sexual partner	2	0.5
A friend	25	5.8
Family	178	41.3
Alone	42	9.7
Unrecorded	6	1.0
<i>Having other job as a source of income</i>		
No	172	39.9
Yes	232	53.8
Unrecorded	27	6.3
Drug use last month	211	49.0
Inject drug last moth	24	5.6
Drug intake is associated with sex	162	37.6
<i>Alcohol intake :</i>		
Daily	30	7.0
At least once weekly	70	16.2
2-3 times/month	72	16.7
None	259	60.1
<i>Drug use:</i>		
Used drugs	211	49.0
Injecting drugs last year	24	5.6
Use of drugs associated with sex	162	37.6

Table (2): Distribution of participants according to their knowledge and practice towards sexually transmitted infections

Variables	No.=431	%
Knowing sexually transmitted infections(STIs):		
Yes	333	77.3
No	86	20.0
No answer	12	2.8
Manifestations of STIs among women:		
Abdominal pain	79	18.3
Unusual vaginal discharge	327	75.9
Bad odour vaginal discharge	358	83.1
Burning sensation during urination	178	41.3
Genital ulcers	194	45.0
Genital itching	309	71.7
Inguinal swelling	83	19.3
No answer	10	2.3
Manifestations of STIs among men:		
Urethral discharge	320	74.2
Burning sensation during urination	208	48.3
Genital ulcers	197	45.7
Genital itching	272	63.1
Inguinal swelling	81	18.8
No answer	21	4.9
Actions taken for observed STIs manifestations in clients :		
Refuse sex	303	70.3
Use condom	37	8.6
Practice sex without condom	75	17.4
No answer	16	3.7
Ever suffer from unusual vaginal discharge last year	328	76.1
Ever suffer from genital ulcers last year	67	15.5
Actions when observing self STIs manifestations :		
Inform my sexual partner	173	40.1
Never inform my sexual partner	183	42.5
Stop working till clearance of manifestations	73	16.9
Stop working till taking appropriate treatment	152	35.3
Continue working while using condom	27	6.3
Continue working without using condom	60	13.9
Duration to start treatment for STIs:		
Few days	272	63.1
1-2 weeks	70	16.2
2-4 weeks	11	2.6
A month or more	12	2.8
Never interested in treatment	64	14.8
No answer	2	0.5
Preferred source of treatment for STIs:		
Governmental hospital	145	33.6
Private clinics /hospitals	198	45.9
Pharmacies	90	20.9
Friends	34	7.9
Herbal and traditional therapy	52	12.1

Table (3): Distribution of studied according to their knowledge, attitude and practices about HIV/AIDS

Variables	No.(n=431)	%
Ever heard about HIV/AIDS	400	92.8
Ever sharing in raising awareness about HIV/AIDS	40	9.3
Knowing a person living with or died from HIV	72	16.7
Having a friend living with or died from HIV	25	5.8
Transmission of HIV infection:		
Insect bites	128	29.7
Sharing food	130	30.2
Sharing needles	329	76.3
From pregnant women to her baby	338	78.4
By breast milk	277	64.3
Prevention of HIV infection:		
Proper condom use prevented HIV infection	174	40.4
Having one faithful healthy partner	220	54.8
Abstain from sex	236	54.8
Attitude towards people living with HIV(PLHIV):		
Apparently healthy person can transmit infection	193	44.8
Accept sharing food with PLHIV	80	18.6
Accept sex with infected friend without condom	8	1.9
Accept sex with infected friend with condom use	32	7.4
Accept taking care for a friend living with HIV	135	31.3
Accept buying grocery from PLHIV	116	26.9
Accept meeting & dealing with friends living with HIV	145	33.6
Knowing about HIV confidential counselling & testing(n=431)	246	57.1
Ever had HIV testing (n=431)	36	8.4
Voluntary HIV testing (n=36)	35	97.2
Informed about test results (n=36)	35	97.2
Last time performing HIV testing: (n=36)		
During last year	31	86.1
1-2 year ago	2	5.5
2-4 years ago	1	2.8
More than 4 years ago	1	2.8
Don't know	1	2.8