

**Barriers to Safer Sex Practices among
Commercial Sex Workers in Osaka, Japan:
Scope for Prevention of Future HIV Epidemic**

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Introduction

Historical Overview of STD Control among Commercial Sex Workers in Japan

1 Background

The HIV/AIDS epidemic continued to spread worldwide with devastating results for human beings. In this epidemic, commercial sex workers (CSWs) are seen as vectors of HIV transmission that need to be controlled and have been the targets of many interventions around the world. In efforts to control HIV/AIDS and sexually transmitted diseases (STDs), some parts of the world have implemented a licensing system with mandatory check-ups; in other parts, prostitution has been criminalized, which has made it virtually impossible to obtain STD data from CSWs.

Historically, neither approach has worked well to control STDs, and a new approach is urgently required. Could it be that this failure to control STDs among CSWs in most countries is due to the fact that CSWs' volition and benefits have not been taken into account? Could it be that the only way to check the spread of HIV/STDs is by enlisting CSWs in education programs, including peer education, and by empowering them *to protect themselves* from infection? In this study, barriers to safer sex practices among CSWs were discussed in a broad context, including arguments for abolishing Japan's Anti-Prostitution Law, in addition to direct barriers to safer sex practices at their work sites.

Referring to the relationship between sex work and HIV/AIDS control, the Joint United Nations Programme on HIV/AIDS (UNAIDS) stated in 1999 that,

Criminal law in the area of prostitution impedes the provision of HIV/AIDS prevention and care by driving people engaged in the industry underground. Such laws should be reviewed with the aim to decriminalize sex work where no victimization is involved, and regulate occupational health and safety conditions to protect sex workers and their clients....Most prostitution laws are founded on nineteenth century notions of morality and were ineffective then, as now, in suppressing the industry, while there continues to be a demand-driven market. By treating sex work as a personal service industry which is neither condemned nor condoned, public health objectives are much more likely to be achieved than under the criminal law.¹

In light of this statement, one of this study's objectives was to review the potential for creating a legal environment in Japan in which participatory HIV/AIDS control programs could work effectively among CSWs.

The issue of whether prostitution should be legalized with compulsory STD inspection by governmental authority, or criminalized in order to do away with CSWs and the spread of STDs, has been controversial for many centuries. STD check-ups for licensed sex workers were historically designed to protect servicemen from becoming infected with syphilis. Before penicillin

was discovered in 1929, syphilis in particular had been a worldwide public health concern for centuries,² as it could cause severe complications such as meningovasucular, neural and visceral damage and death. Congenital syphilis in newborns was also a serious matter of concern. Until recently, however, STD control has not been discussed or implemented solely to protect CSWs from infection.

The first licensed prostitution system established by a city medical authority was in Paris, France in 1802 to prevent the spread of STDs, mainly among soldiers through sex workers. This type of governmental control was followed in other European countries--in the United Kingdom, for instance, with the Contagious Diseases Act in 1864--as well as in some of the US states by the end of the nineteenth century.³

2 Japan's governmental STD control of commercial sex workers

Japan had a long tradition of professional prostitution, even before the opening to the outside and modernization that began in 1868 with the Meiji Restoration; professional sex workers were, for instance, zoned and protected by the Edo Tokugawa government (1603-1868). In her book *History of Sexuality*, Fujime points out that the licensed prostitution system with the Meiji Restoration was modernized in a form adapted to the new government's nationalistic initiatives. Accordingly, they introduced European systems, and in particular, mandatory syphilis check-ups among CSWs. These were first introduced to the licensed sex workers who exclusively serviced Caucasians in the port of Nagasaki, which, historically, was the only town where foreigners were allowed. Prostitutes' hospitals were later built in ports such as Yokohama, Nagasaki, and Kobe.³

The modern licensed prostitution system in Japan was established mainly to prevent syphilis from spreading among servicemen, not to protect CSWs or the general population. The number of licensed sex workers reported nationwide was 23,713 in 1879, 27,075 in 1886, 39,068 in 1896, 44,542 in 1906, and 52,325 in 1924. This number rapidly grew as the government became increasingly imperialistic through the Sino-Japanese War (1894-95), the Russo-Japanese War (1904-05), World War I and World War II.

At the same time, non-licensed sex workers, who were suspected of being the source for the spread of STDs, were strictly criminalized and arrested by police: approximately 24,500 of them were arrested between 1884 and 1887.³ This large number suggests that the licensing system had driven non-licensed sex workers underground, which also made it difficult to control their STDs. It also suggests that, in spite of police threats, non-licensed sex workers chose not to be licensed and that zoned sex workers, who were controlled by government with license fees and mandatory STD check ups, were more stigmatized by the society.

Despite this, after World War II, there was strong resistance among licensed sex workers against the government's move to abolish the licensing system, which would criminalize their work.

They were completely ignored, however, by the well-educated and well-meaning Christians, socialists and proto-feminists, who opposed the licensing system and viewed CSWs as victims of an authoritarian governmental system. The atmosphere in Japan following its defeat in World War II and US efforts to impose democracy, along with the birth of the international human rights movement with the 1948 UN Declaration of Human Rights, which came after the horrors of the war, did not allow the government to maintain the licensed prostitution system any longer. Japan's Anti-Prostitution Law was enacted in 1956 and the mandatory STD check-ups were accordingly abolished.

3. Effects of the Anti-Prostitution Law

Figure 1 shows the number of CSWs who were arrested under Chapter 5 (Solicitation) of the Anti-Prostitution Law, which prohibits sex workers from publicly soliciting. It was mostly street sex workers who were arrested in the 1950-60s, while Japan was still recovering from World War II. However, despite the dramatic decrease in the number of arrests, there is reason to believe that prostitution itself did not change; instead, it took new forms. In 1964 the Prostitution Control Advisory Committee, which was appointed by the Prime Minister's Office, proposed strengthening control of prostitution:⁴ the committee was worried that techniques for evading arrest and for disguising house-based prostitution were becoming increasingly sophisticated. It is interesting that the Advisory Committee which viewed prostitution as a moral obstacle to Japan's modernization and development, was deeply concerned with the nation's international image when the 1964 Tokyo Olympic Games were about to be held, and that prostitution was still quite obvious in places like Beppu, a natural hot springs tourist area.

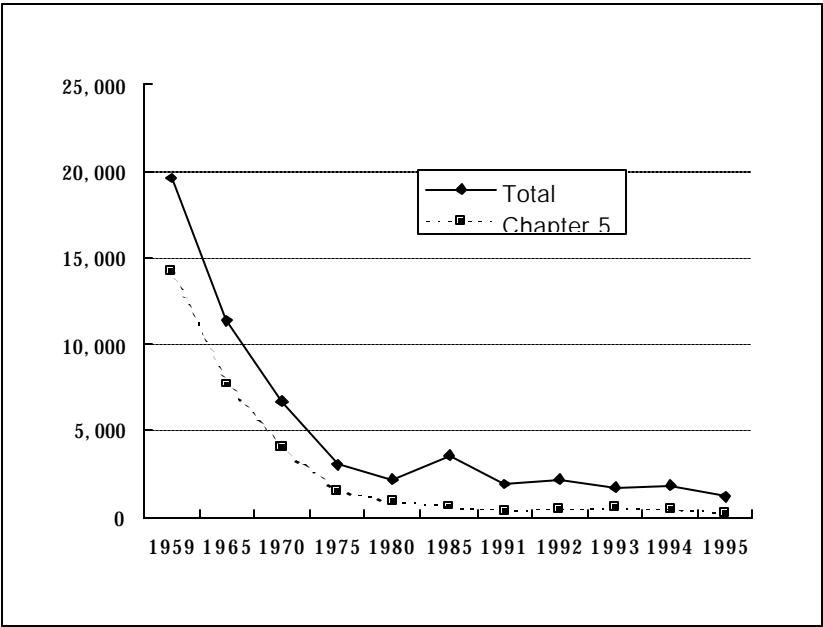
In 1986 the Prostitution Control Advisory Committee reported that, through brokerage and contracting of prostitution, organized crime members were one of the major violators of the Anti-Prostitution Law, as well as the Child Welfare Act, for using teenagers as sex workers, the immigration laws, for using illegal immigrants. But the Anti-Prostitution Law makes sex workers seek protection from organized crime in order to avoid police arrest, thus creating an environment in which illegal immigrant CSWs, for instance, are driven underground into a world which organized crime dominates. Figure 2 shows that although the total number of arrests of organized crime members has been dramatically decreasing, the proportion of organized crime members of arrested for violating the Anti-Prostitution Laws has been steadily increasing.

In contrast to many European countries today, where prostitution has been decriminalized as long as it is performed as a personal service under a woman's own free will, East Asian countries such as Japan, South Korea, China,⁵ and Taiwan still tend to regard visible prostitution, especially in urban area, as something shameful in a modernized nation. Brothel and street sweeps are repeatedly performed by police in these countries, driving sex workers further underground. At the

same time, however, sexual entertainment is often used by corporations in Taiwan, Japan and South Korea to make business negotiations proceed more smoothly. One researcher reported how prostitution at least has contributed indirectly to South Korea's economic development.⁶ Her study suggests that the sex industry's markets in East Asian countries are largely driven by national economic demands.

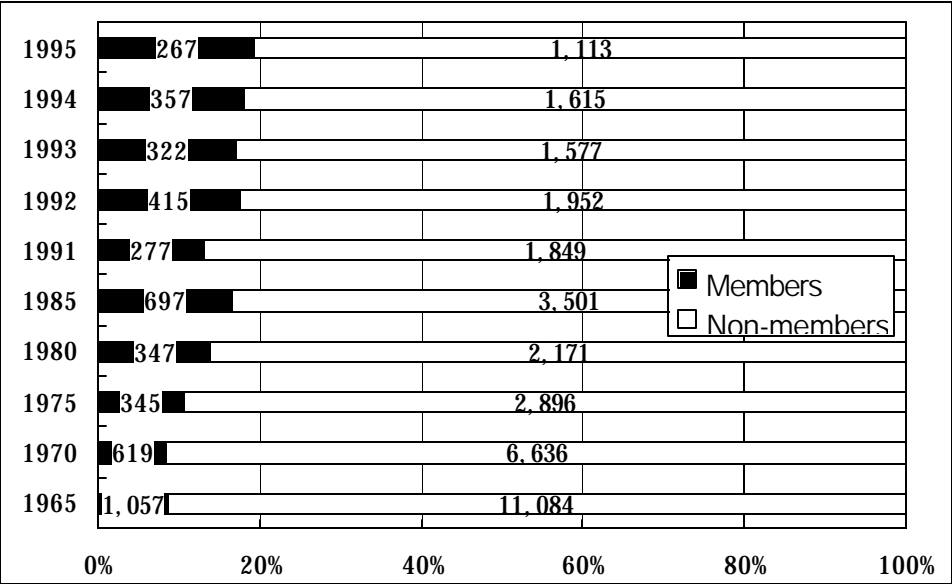
Since the Anti-Prostitution Law in Japan was enacted in 1956, the STD data from Japan's CSWs has not been available except from some serological research. Our study was conducted to assess the current risks of HIV/STDs among sex workers forty years after Japan's Anti-Prostitution Law was implemented in 1958. It also offers a basis for discussion as to what kind of system or program sex workers would see as benefiting them and would encourage them to participate in HIV/STD control as people who are more aware of HIV/STDs than the general population.

Figure 1 Number of arrests for violating Japan’s Anti-Prostitution Law



Source: Prime Minister’s Office

Figure 2 Proportion of organized crime members among arrests for violating the Anti-Prostitution Law and related laws



Source: Prime Minister’s Office

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Chapter 1

Changing Patterns in the Sex Industry and in Sexually Transmitted Diseases among Two Types of Commercial Sex Workers in Osaka, Japan

Introduction

There has been a dramatic change in Japan's sex industry since the 1980s, especially in urban areas where the traditional commercial sex worker (CSW) is being marginalized by a new type who offers manual stimulation, cunnilingus and fellatio, culminating in ejaculation in the oral cavity, but not vaginal intercourse. In her book *Butterflies of the Night*, Lisa Louis called attention to these newly emerging "amateurs" or "soft cores", (in contrast to "pros" or "hard cores",) who first came to public attention during a wave of police arrests of brothel owners and CSWs. Japan's Anti-Prostitution Law, which basically prohibits both organized and individual sex work when vaginal intercourse is involved, does not extend to non-vaginal sex, nor is it prohibited under the Entertainment Establishments Regulation Law, which mainly regulates its location and hours of operation. Louis also pointed out that the "soft-core ejaculation industry's" brilliance is in sexually satisfying men legally at a low price, while attracting more women to the work because it does not involve sexual intercourse.¹

The growing awareness of HIV/AIDS among the general population in the 1980s also played a key role in accelerating this change in the sex industry as both CSWs and their male clients came to believe that oral sex is much safer than vaginal intercourse in terms of STD infection, including HIV. However, in the 1990s, cases of urethritis, especially gonococcal urethritis transmitted by oral sex with non-vaginal commercial sex workers (NV-CSWs), first began to appear. This was consistent with earlier observations reported by Maeda et al. at Toyota Memorial Hospital, that the number of clients infected with STDs by CSWs working at bathhouse brothels (so-called soaplands) and by foreign CSWs (mostly from Thailand and the Philippines) had dramatically decreased since the end of the 1980s.²

These changes were also associated with socioeconomic aspects of STDs in an era of economic depression following the collapse of Japan's "bubble economy". Maeda et al. also observed that Toyota factory workers began to seek cheaper, non-vaginal sexual service because they were no longer paid overtime. These workers sought non-vaginal sex in "fashion health massage parlors" (i.e. rooms for manual massage, cunnilingus, and fellatio) and "pink salons" (i.e. bars with darkened booths for sexual encounters excepting vaginal intercourse).

While the literature on oro-genital transmission includes a report that *Chlamydia trachomatis*, *Haemophilus ducreyi*, and *Neisseria meningitidis* have been found in throat material following oral sex,³ we found no publications in the indexed literature regarding risk assessment of STDs among CSWs of Japanese nationality, which could establish the potential for a future HIV epidemic. The current study was conducted to support the development and implementation of intervention programs for the prevention of STDs and HIV among CSWs of different types.

Methods

Study design

A cross-sectional study was performed by means of a standardized self-administered questionnaire on CSWs who attended an STD clinic in Osaka over the period 1 April 1998 to 31 March 1999. The purpose of their visit to the clinic was routine screening and diagnosis of STDs and HIV infection. All participants in this study were CSWs of Japanese nationality who had completed at least the nine years of compulsory education, and could read and write Japanese well enough to answer the questionnaire, which was written in standard Japanese.

The self-administered questionnaire assessed the following factors: sociodemographic information (age, education, category of CSW, length of career as a CSW); working conditions (days per month, hours per day, number of clients per day, time per client, income per day); sexual behavior (age at first intercourse, condom use at first intercourse, condom use with clients, method of condom use with clients, number of sexual partners in private life, condom use with private partners, method of condom use with private partners); reproductive history (oral contraceptive pill use, induced abortion, miscarriage, parity); history of STD diagnoses over the previous year (chlamydial infection, gonorrhea, syphilis, trichomoniasis, phthiriasis pubis, genital herpes, condyloma acuminatum, candidiasis); history of symptoms or signs over the previous year; knowledge of HIV transmission route, and transmission route, symptoms, and complications with respect to STDs. “Currently diagnosed STD” was the result of the screening tests of asymptomatic clients or the diagnosis of symptomatic clients on the day they visited the clinic and completed the questionnaire.

The routine screening for asymptomatic CSWs at this clinic was standardized. Cervical specimens were obtained for microscopic gonorrheal study (methylene blue stain), and chlamydial antigen testing (IDEIA Chlamydia, EIA Plate Method, Dako Diagnostics Ltd. Ely, UK.). Blood was taken for serologic testing for syphilis (rapid plasma reagin test, fluorescent treponemal antibody absorption test for confirmatory testing and T. Pallidum hemagglutination assays) and HIV-1, 2 antibodies test (Enzyme Immunoassay). Vaginal swab was taken from symptomatic CSWs for direct microscopic T. Vaginalis study and C. Albicans culture study. Genital herpes and some cases of candidiasis were clinically diagnosed by their symptoms and signs.

So far as recall bias is concerned, the study group consists of CSWs who are generally required by their employers to regularly visit an STD clinic at least once a month for screening and to obtain a medical certificate guaranteeing they are free of infection. The study group consists of professional sex workers who, one can fairly assume, are more aware of STDs than the general population.

Ethical considerations

The purpose of this study was explained on the questionnaire's cover page. CSW participants were invited to read the explanation of the study and to fill out the questionnaire. The clinic itself made it clear that there was no obligation to fill out the questionnaire and no penalty for leaving it blank. This study asked detailed questions about sexual behaviors with both clients and private partners, but responses were overwhelmingly positive, so we do not think we discomforted the CSW participants.

The questionnaire was anonymous, but to combine the current diagnoses on the medical record and the results of the questionnaire, participants' birth date and the date they participated in the study were used instead of their names to ensure confidentiality. With respect to risks and benefits, there were no interventions in the study, but these CSWs could benefit from findings that could serve as a basis for interventions to reduce the risk of STD and HIV infection.

Definition of variables

Since six years of primary school and three years of junior high school education are legally compulsory in Japan, participants were classified into two groups: CSWs who had only finished compulsory education or were high school dropouts (fewer than 12 years of education), and high school, college and university graduates (12 years of education or more). The vaginal CSWs included: (a) CSWs working at bathhouse brothels (otherwise known as "soapland", which used to be known as *toruko*, short for Turkish bath); (b) on-call sex massage providers; (c) CSWs working at brothels in former legal red light districts (so-called *akasen*, which were regulated by the government and officially closed in 1958, but which unofficially exist in different settings); and (d) "companions", the equivalent of Western call girls. The non-vaginal CSWs included: (a) CSWs working at "fashion health massage parlors"; (b) CSWs working at "pink salons"; (c) CSWs working at *imekuras*, or "image clubs", which cater to male fantasies, and where CSWs sometimes play the role of nurse, doctor, teacher or high school student; and (d) CSWs working at sadism and masochism (S&M) clubs.

Statistical analyses

Categorical variables of sociodemographic characteristics, working conditions, sexual behavior and reproductive history were measured by contingency X^2 analysis. Average age was measured by t test. A logistic regression model was used to determine age-adjusted odds ratio for STDs, and symptoms and signs. Analyses were done with Statistical Package for Social Science (SPSS) for Windows Version 10.0 J.

Study group

Between April 1998 and March 1999, all 472 CSWs attending an STD clinic in Osaka

were given the questionnaire described above. Seventeen (3.6%) who answered less than 50% of the questions or did not indicate their category of CSW were excluded from the study. A total of 455 CSWs (96.4%) were analyzed as the study group. Those classified as V-CSWs included: 65 who were working at bathhouse brothels (“soapland”), 15 as on-call sex massage providers, 8 at brothels in former legal red light districts, and 4 as “companions”. Those classified as NV-CSWs included: 256 working at “fashion health massage parlors”, 87 at “pink salons”, 18 at *imekuras*, and 2 at S&M clubs. The study group consisted of 92 V-CSWs and 363 NV-CSWs.

Results

Sociodemographic characteristics and working conditions

The sociodemographic data and working conditions of V-CSWs and NV-CSWs are shown in Table 1. The mean age of the V-CSWs was 8 years older than that of the NV-CSWs. The proportion of V-CSWs who had completed 12 years of education did not differ from that of the NV-CSWs. V-CSWs were significantly more likely to have had one or more years of professional experience working as CSWs than the NV-CSWs.

The proportion of V-CSWs who worked over 15 days per month and over 6 hours per day did not differ from that of the NV-CSWs, though V-CSWs were significantly less likely to have 5 or more clients per day than the NV-CSWs. The V-CSWs were significantly more likely to spend 45 minutes or more per client than the NV-CSWs, and they were significantly more likely to earn on average over 50,000 yen (about US \$450) per day than the NV-CSWs.

The sexual behavior and reproductive history of the V-CSWs and NV-CSWs are shown in Table 2. There was no difference between the two groups in age at first sexual intercourse and condom use at first intercourse. V-CSWs were significantly less likely to have had 2 or more sexual partners in private life over the previous year than NV-CSWs. There was no difference in condom use in private life between the two groups, though V-CSWs were significantly more likely to use oral contraceptives than NV-CSWs. Furthermore, V-CSWs were significantly more likely to have experienced both induced abortion and parity than NV-CSWs.

An important finding of the study was the frequent non-use of condoms by NV-CSWs. While there were a number of explanations, the most important by far was that it was “prohibited by employers” (53.7%).

STDs and STD infection odds ratios

The proportion of CSWs who were diagnosed with STDs either currently or over the previous year and the NV-CSWs’ age-adjusted odds ratios against the V-CSWs for each STD are shown in Table 3. The most frequently diagnosed STD in both V-CSWs and NV-CSWs was chlamydial infection. However, V-CSWs were significantly more likely to get infected with

trichomoniasis and genital herpes. At least one STD episode among all studied STDs was diagnosed in 67.4% of the V-CSWs and 60.6% of the NV-CSWs.

Symptoms or signs and odds ratios

The proportion of CSWs who reported symptoms or signs over the previous year and the NV-CSWs' odds ratios against the V-CSWs for each symptom or sign are shown in Table 4. The most frequent complaint in both the V-CSWs and NV-CSWs was genital and/or circum-anal itchiness. However, the V-CSWs were significantly more likely to complain of genital and/or circum-anal eruption, lower abdominal pain except menstrual pain, and coital pain.

Discussion

Selection bias in relation to changing patterns of commercial sex work

Both "soapland" V-CSWs and NV-CSWs working at "fashion health massage parlors" and "pink salons" are obligated by their employers to regularly visit an STD clinic once a month for screening and to obtain a medical certificate guaranteeing they are free of infection. In contrast to these house-based CSWs, there are also freelance street CSWs and illegal immigrant CSWs who rarely visit STD clinics for routine screening purposes. The V-CSWs in this study therefore cannot be seen as representing all vaginal sex workers in the area; this is in contrast with the NV-CSWs, who do represent non-vaginal sex workers in general. Nevertheless, our study may help to capture the groups who are vulnerable with respect to a future HIV epidemic.

Though demand for their services is decreasing, it is assumed that freelance street CSWs are engaged in riskier sex work in terms of STDs and HIV infection than are house-based CSWs, as shown in a study in Amsterdam.⁴ However, further study in the field in cooperation with health offices and police authorities, for example, is needed to assess risks for underground CSWs.

On the other hand, the study of NV-CSWs may help to roughly determine the risks of STDs and HIV among the general population at sexually active ages, as half the participants in this study were NV-CSWs whose professional career was less than one year in duration.

Risky sex behavior and high proportion of CSWs diagnosed with STDs

This study showed that there were no significant differences between V-CSWs and NV-CSWs in the risk of STD infection except for trichomoniasis and genital herpes, which occurred more frequently in V-CSWs. However, as the presence of genital herpes is reported to increase the transmission of HIV,⁵ V-CSWs can be more vulnerable to HIV infection. Genital herpes is usually transmitted sexually, and initial infection is frequently followed by recurrent attacks at irregular intervals, often over a period of many years.⁶ According to a birth cohort study of 21-year-old New Zealanders, it was the lifetime number of partners and STD history that were

associated with the prevalence of herpes simplex virus 2 (HSV-2) antibody among females.⁷ Further analysis suggested that younger age and higher income with longer working hours were associated with clinically diagnosed genital herpes among the V-CSWs in this study, while condom use was not.

In our study, chlamydial infection was the major STD in both CSW groups, reflecting an epidemic throughout Japan. Further analysis showed that only 14 V-CSWs (15.2%) out of 92 used condoms with clients “consistently and correctly.” This was associated with the current and/or past one year’s history of chlamydial infection diagnosis. Here “correct” users were those who answered that they use condoms “from beginning to end, so that the mouth, genitalia and anus does not touch the client’s genitalia directly,” while “incorrect” users were those who answered that they use condoms “just before insertion or ejaculation.” We also found that incorrect use of condoms was more frequent among those who used oral contraceptives, perhaps because CSWs who do not use oral contraceptives are careful to use condoms as a measure of contraception.

Candidiasis was also frequently seen in both groups. Classically, candidiasis infection is predisposed by pregnancy, oral contraceptives, diabetes mellitus, antibiotics and HIV infection. Other factors include wearing tight, poorly ventilated clothing and nylon underclothing, douching, as well as using tampons rather than sanitary napkins, and oral sex. Cunnilingus also appears to predispose to recurrent vaginal candidiasis, although the mechanism for this is unclear.³ As cunnilingus is a sexual service that is especially encouraged in the non-vaginal sex industry, this might be one of the factors to explain the high proportion of NV-CSWs with a history of candidiasis. Psychological factors related to chronic recurrences of candidiasis were studied in the U.K., and it was reported that women with recurrent vaginal candidiasis were significantly more likely to suffer clinical depression, to be less satisfied with life, to have poorer self esteem, and to perceive their lives as more stressful.⁸ In the Osaka STD clinic where the current study was conducted, the author observed that sleeping pills were often prescribed for CSWs, which might be an indicator of the physical and mental stress they live with.

The NV-CSWs were prohibited by their employers from using condoms in oral sex except with clients with phimosis. The V-CSWs, on the other hand, used condoms as a general rule except when clients paid for non-condom sex. In addition, about half of the NV-CSWs answered that they never or rarely used condoms with their private partners. One possibility is that NV-CSWs are infected with STDs in the oral cavity or throat by clients; they then infect their private partners by fellatio, and are in turn infected in their reproductive tracts by vaginal intercourse without the use of condoms. Thus, while NV-CSWs are not directly exposed to reproductive tract STDs in their occupation, they are likely to be exposed to them indirectly through private sexual partners.

An important question was whether the CSWs could be directly infected with STDs from their private partners when condoms are not used. Tchoudomirova et al. studied migratory CSWs

from Bulgaria working in Europe and suggested an association between the high rate of STDs and the low rate of condom use with CSWs' pimps/boyfriends.⁹ In another study, the risk behavior patterns for STDs and HIV among female sex workers of three distinct categories in Bali, Indonesia were evaluated, and it was concluded that despite significant differences in the numbers of their clients and condom use, all three groups reported high levels of STD symptoms.¹⁰ These studies indicate that CSWs are likely to be infected through inconsistent and/or incorrect use of condoms from both their private relationships as well as their professional contacts. Our study showed a rather conservative private sexual life among CSWs in terms of the number and types of sexual partners. Only 4.6% had a relationship with a casual partner, while 3.3% had sex with a male CSW (a so-called host in Japan) over the previous year. Twenty-nine percent of the V-CSWs and 15% of the NV-CSWs had male cohabitants. The potentially high rates of STDs among regular partners of CSWs possibly affected the high proportion of CSWs diagnosed as having STDs.

Japan has long been well known for its high rate of condom use and, until recently, the illegality of oral contraceptive pills. However, these patterns do not apply to CSWs. In the context of the traditional cultural background of the patriarchy, in which the father (the male head of the household) has an absolute right of decision over family matters including birth control, men were pressured to control birth by using condoms, while women had no option but induced abortion if a pregnancy was unwanted. This helps to explain why Japan is culturally tolerant of women having abortions. However, as CSWs are regarded as women outside the paternalistic familial system, condom use is less expected with them. This has recently changed somewhat, however, because of the HIV epidemic throughout the world.

Genital and/or circum-anal complaint

The proportion of CSWs who had at least one genital and/or circum-anal symptom and sign was high in both the V-CSWs (68.1%) and NV-CSWs (75.3%). The most frequent complaints were genital and/or circum-anal itchiness in 36% of the V-CSWs and 47% of the NV-CSWs. Genital and/or circum-anal eruption, lower abdominal pain, and coital pain were more frequent in the V-CSWs than the NV-CSWs. The more frequent genital herpes among the V-CSWs might be reflected in these complaints.

Symptoms and signs differ from place to place according to the distribution of endemic STDs. In Calcutta, India, white discharge, abdominal pain, and burning sensation were reported in 62%, 48% and 47% of CSWs respectively.¹¹ Chlamydial infection is the most prevalent STD in Japan as well as the U.S. and Europe, though it is mostly asymptomatic and detected in screening programs. In an attempt to establish a systematic clinical algorithm in Dakar, Senegal, symptoms and signs specifically associated with gonorrhea and chlamydial infection were reportedly difficult to identify.¹² Women who are engaged in commercial sex work should therefore be encouraged to

be screened routinely by laboratory tests, treated properly, and receive preventive education. Self-treatment is risky and should be avoided to prevent drug resistance.

Implications for effective interventions

In view of the insights provided by this and other studies regarding causative factors in the spread of STDs and the potential danger of an HIV/AIDS epidemic, further attention must be given to preventive and promotive interventions.

Furthermore, effective condom use is not solely a matter of CSW volition; the decision must also involve brothel owners and male clients. Experiences in other countries are very relevant in this regard. For instance, it has been pointed out that an intervention in condom promotion targeted at only CSWs in Ghana was seriously limited;¹³ in Europe it has been reported that consistent use of condoms occurs particularly when an employer provides them, which may reflect the effectiveness of the “safe sex” policy practiced in some brothels.⁴ Similar findings emphasizing the influence of the work establishment were reported from the Philippines and Thailand.^{14,15} A successful intervention in condom promotion targeted not only at CSWs but also at clients and pimps was reported from Indonesia.¹⁶ The effectiveness of training outreach workers was also underlined in the same study. According to our study, while there is a consensus on condom use among house-based workers (such as soapland CSWs and CSWs in former red light areas) and their employers, condom use was actually not properly practiced. Messages regarding the correct use of condoms for STD prevention both occupationally and privately should be disseminated wherever possible, including through STD clinics.

Furthermore, Japan’s Anti-Prostitution Law needs to be amended in the context of HIV/STD control, as police interference prevents street girls, especially foreign female sex workers, from seeking proper health service for HIV/STDs. While it will be more difficult to negotiate with the employers of NV-CSWs, as they are not under the control of the present Anti-Prostitution Law, police, prefectural health offices, city health offices, and STD specialists need to collaborate in designing and implementing the most effective ways of preventing a future HIV epidemic through heterosexual contact. It should be pointed out that some of the NV-CSWs in our study wrote that they did not want to use condoms because it delays the excitement and ejaculation of their clients, which they want to speed up in order to service the greatest number over a given period of time. “Fashion health massage parlor” and “pink salon” employers should therefore be involved in education programs on HIV/STDs focusing on oro-genital transmission of STDs and condom promotion. A study in Bolivia showed that effective interventions for female CSWs can be implemented while HIV rates are still low.¹⁷ Japan should also begin working with potentially vulnerable groups for HIV/STDs as early as possible while its HIV rates are still low.

Concluding Reflections

This study has highlighted aspects of commercial sex work in Osaka that are of critical importance in terms of current and future risks of increase in STD infections, including the entry and spread of HIV. These same risks are also applicable through commercial sex work in other societies.

A number of conclusions and other relevant observations can be drawn from this study.

1. The proportion of CSWs with STD history and genital and/or circum-anal complaints were high in both V-CSWs and NV-CSWs, in contrast to the belief that NV-CSWs are at lower risk for reproductive tract STDs. However, V-CSWs are more vulnerable to HIV infection than NV-CSWs because of the more frequent presence of genital herpes.
2. While it is known that appropriate condom use can reduce STD transmission rate, there are commercial reasons for the avoidance or limitation of condom use: prohibition of their use by employers of NV-CSWs in particular, and limited use by CSWs who seek more rapid and efficient culmination of sexual acts.

It is clear that the CSW context of Osaka is indeed vulnerable to the entry and spread of HIV. Countering this risk calls for collaboration among all parties to reach as many CSWs as possible, so as to increase their understanding of the risks they face, and to promote and require more consistent use of condoms and frequent visits to STD clinics, as well as for the extension of safe practices to their private lives.

Of special importance is the negative influence of the work establishment in promoting unsafe sexual practices for commercial reasons, such as limiting condom use. Thus, a key factor in promoting condoms to reduce STDs and HIV is to insist on the social accountability of those who control the commercial sex industry.

A follow-up study of the organization, implementation and evaluation of such initiatives could advance the control of STDs and lessen the likelihood of the entry of HIV into this setting.

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Table 1 Sociodemography and working conditions of female CSWs in Osaka, Japan

		V(Vaginal)-CSW		NV(Non-Vaginal)-CSW		
Variables		n=92		n=363		p Value (X ²)
Age (years old)	mean±SD(range)	31.5± 6.8(19-49)		23.8± 4.9(18-46)		< 0.001 (t test)
		Number (%) [*]		Number (%) [*]		
Years of education						
	9-12 years	22	(24.2)	81	(22.4)	NS**
	12 years or more	69	(75.8)	280	(77.6)	
Length of career as a CSW						
	<1 year	15	(16.3)	222	(61.3)	< 0.001
	1 year or more	77	(83.7)	140	(38.7)	
Working days/month						
	<15 days	23	(25.0)	112	(30.9)	NS
	15 days or more	69	(75.0)	250	(69.1)	
Working time/day						
	<6 hours	18	(19.8)	74	(20.5)	NS
	6 hours or more	73	(80.2)	287	(79.5)	
Clients/day						
	<5 clients	61	(67.0)	60	(16.7)	< 0.001
	5 clients or more	30	(33.0)	300	(83.3)	
Time/client						
	<45 minutes	27	(29.7)	331	(91.7)	< 0.001
	45 minutes or more	64	(70.3)	30	(8.3)	
Income/day						
	<50,000 yen (US\$450)	49	(53.8)	292	(81.3)	< 0.001
	50,000 yen(US\$450) or more	42	(46.2)	67	(18.7)	

* Because of missing data some percentages are not based upon the full number of participants.

**NS: Not Significant

Table 2 Sex behaviour and reproductive history of female CSWs in Osaka, Japan

Variables	V (Vaginal)-CSW n=92	NV (Non-Vaginal)-CSW n=363	p Value(χ^2)
	Number (%) [*]	Number (%) [*]	
Age at first intercourse			
<16 years old	21 (23.1)	76 (21.2)	NS**
16 years old or more	70 (76.9)	282 (78.8)	
Condom use at first intercourse			
yes	39 (45.3)	167 (50.3)	NS
no	47 (54.7)	165 (49.7)	
Condom use for work			
always/mostly/occasionally	82 (89.1)	48 (14.2)	< 0.001
never/rarely	10 (10.9)	290 (85.8)	
Method for condom use for work			
just before insertion or ejaculation	55 (72.4)	19 (46.3)	0.005
from the beginning to the end	21 (27.6)	22 (53.7)	
Partners in private life over the previous year			
<2 partners	68 (73.9)	148 (41.2)	< 0.001
2 partners or more	24 (26.1)	211 (58.8)	
Condom use in private life			
always/mostly/occasionally	42 (46.2)	188 (52.7)	NS
never/rarely	49 (53.8)	169 (47.3)	
Method for condom use in private life			
just before insertion or ejaculation	18 (81.8)	131 (87.9)	NS
from the beginning to the end	4 (18.2)	18 (12.1)	
Oral contraceptive pill use			
always	59 (65.6)	21 (6.0)	< 0.001
occasionally/no	31 (34.4)	331 (94.0)	
Induced abortion			
yes	59 (65.6)	147 (40.9)	< 0.001
no	31 (34.4)	212 (59.1)	
Miscarriage			
yes	11 (12.2)	34 (9.5)	NS
no	79 (87.8)	324 (90.5)	
Parity			
yes	31 (34.4)	73 (20.4)	0.005
no	59 (65.6)	284 (79.6)	

* Because of missing data some percentages are not based upon the full number of participants.

**NS: Not Significant

Table 3 Proportion of CSWs diagnosed with STDs either currently or over the previous year and the NV-CSWs' age-adjusted odds ratio against V-CSWs for each STD

Disease	V (Vaginal)-CSW n=92		NV (Non vaginal)-CSW n=363		Age-adjusted odds ratio	
	Number(%)		Number(%)		Odds ratio	95%CI
Chlamydial infection	36	(39.1)	132	(36.4)	0.64	0.37-1.11
Gonorrhoea	4	(4.3)	18	(5.0)	1.30	0.37-4.64
Syphilis	4	(4.3)	4	(1.1)	0.42	0.08-2.23
Trichomoniasis	9	(9.8)	10	(2.8)	0.25	0.08-0.76
Phthiriasis pubis	3	(3.3)	5	(1.4)	0.72	0.13-4.08
Genital herpes	23	(25.0)	25	(6.9)	0.20	0.10-0.43
Condyloma acuminatum	1	(1.1)	7	(1.9)	1.15	0.11-12.15
Candidiasis	31	(33.7)	102	(28.3)	0.91	0.52-1.61
Any STD of all	62	(67.4)	220	(60.6)	0.67	0.38-1.17

CI: Confidence Interval

Table 4 Proportion of CSWs with genital, circum-anal and/or oral symptoms and signs currently or over the previous year, and NV-CSWs' age-adjusted odds ratio against V-CSWs for each symptom or sign

Symptoms and signs	V (Vaginal)-CSW n=91		NV (Non vaginal)-CSW n=360		Age-adjusted odds ratio	
	Number(%)		Number(%)		Odds ratio	95%CI
Genital and/or circum-anal itchiness	33	(36.3)	168	(46.7)	1.07	0.62-1.85
Genital and/or circum-anal pain	16	(17.6)	70	(19.4)	0.90	0.45-1.80
Genital and/or circum-anal eruption	15	(16.5)	28	(7.8)	0.28	0.12-0.64
Genital and/or circum-anal ulcer	5	(5.5)	14	(3.9)	0.50	0.15-1.72
Coloured and/or odorous discharge	18	(19.8)	123	(34.2)	0.95	0.50-1.82
More discharge than usual	13	(14.3)	112	(31.1)	1.61	0.80-3.24
Urinary pain or burning sensation	7	(7.7)	40	(11.1)	0.84	0.32-2.18
Lower abdominal pain except menstrual pain	27	(29.7)	68	(18.9)	0.44	0.24-0.82
Coital pain	19	(20.9)	59	(16.4)	0.32	0.16-0.66
Labial and/or oral pain	7	(7.7)	43	(11.9)	0.88	0.34-2.27
Any genital and/or circum-anal symptoms and signs	62	(68.1)	271	(75.3)	0.78	0.43-1.42

CI: Confidence Interval

Chapter 2

Interrelationship of Oral Contraceptive Use, Condom Use and Chlamydial Infection among Vaginal Commercial Sex Workers in Osaka, Japan

Introduction

Condoms have long been the main method of contraception in Japan (77.8% for married women and 95.1% for unmarried women), with legal abortion as a back up.¹ Though doctors in Japan had prescribed high-dose oral contraceptives (OCs) to sex industry workers for many years, the Ministry of Health did not approve their use among the general population (except for therapeutic purposes) until June 1999--nearly forty years after they were so approved in the United States.

Approval of OCs had been resisted by Japanese authorities for a variety of reasons.² In the 1990s, the chief objection to their introduction was the fear that the new low-dose OCs would replace condoms as the primary means of contraception, which would lead to the increased spread of HIV and other sexually transmitted diseases. Although condoms had not been promoted in Japan as a means to prevent STD transmission since World War II, OC opponents maintained that it was the tradition of using condoms for birth control that had kept the prevalence of HIV in Japan so low.

While studies have found oral contraceptives to be a risk factor for HIV-1,³⁻⁵ other reports have refuted these findings.⁶⁻⁸ However, none of these studies has analyzed the relationship between oral contraceptive and condom use; instead, they have been analyzed as independent factors associated with HIV infection. We found no publications in the indexed literature regarding the relationship between OC use and condom use, apart from several studies done in Japan on how OC availability would change sexual behavior among college students.^{9,10} In addition, Japan's Anti-Prostitution Law makes it difficult to survey vaginal sex workers. Our limited study was therefore conducted in a clinical setting to explore the present situation of oral contraceptive use, condom use and STDs among sex workers, and to analyze the relationship between them.

Methods

Study group

To examine the relationship between oral contraceptive use and condom use, we excluded 363 non-vaginal commercial sex workers (NV-CSWs) whose service mainly involved oral sex. The responses of a total of 92 vaginal commercial sex workers (V-CSWs) who identified themselves on the questionnaires as "sex workers at bathhouses," "sex workers in former red light districts," "on-call sex massage providers" or "call girls"--categories of sex workers which generally provide vaginal sex and use condoms--were analyzed.

Data analyses

Age-adjusted odds ratios against "incomplete" use of condom with clients were determined for each variable by logistic regression model. The odds ratios were measured to compare the risk of a current and/or previous year's history of chlamydial infection by condom-use

status. Multiple logistic regression model was used to determine adjusted odds ratios against “incomplete” use of condom with clients for controlling selected variables. Analyses were done with Statistical Package for Social Science (SPSS) Version 10.0 J for Windows.

Results

Condom use with clients and private partners

Among the 92 V-CSWs in the study group, 15 (16.3%) were “consistent and correct” condom users with clients, 25 (27.2%) were “consistent but incorrect” users, and 52 (56.5%) were “inconsistent or non” users. “Consistent but incorrect” and “inconsistent or non” users were jointly classified as “incomplete” users. “Correct” users were those who answered that they use condoms “from beginning to end, so that the mouth, genitalia and anus does not touch the client’s genitalia directly,” while “incorrect” users were those who answered that they use condoms “just before insertion or ejaculation.” With private partners, only 3 (3.3%) were “consistent and correct” users, 5 (5.4%) were “consistent but incorrect,” and 65 (70.7%) were “inconsistent or non” users. There were 15 (16.3%) who answered that they had “no partners” in private life.

Risks of “incomplete” condom use

Associations between sociodemographic characteristics, sexual behaviors, reproductive history and risk of “incomplete” condom use are shown in Table 1. Oral contraceptive users were more likely to use condoms “incompletely” (Odds ratio: 5.47, CI: 1.53-19.52). Multivariate analyses shown in Table 4 indicate that contraceptive use is significantly associated with “incomplete” condom use (Odds ratio: 5.69, CI: 1.43-22.66) even after age, years of education, length of career as V-CSW, and income per day were controlled

Proportion of V-CSWs diagnosed with STDs

None of the participants were HIV positive. The proportion of V-CSWs diagnosed with STDs either currently or over the previous year is shown in Table 2. The most frequent STD was chlamydial infection (39.1%) followed by candidiasis (33.7%) and genital herpes (25.0%).

Interrelationship between condom use and history of chlamydial infection

The relation between condom use with clients and a current and/or previous year’s history of chlamydial infection is shown in Table 3. The proportion of V-CSWs who had a current or previous year’s history of chlamydial infection was significantly lower in V-CSWs who were “consistent and correct” condom users than in those who were “inconsistent or non” users (Odds ratio: 0.08, CI 0.01-0.68). There was no difference between “consistent but incorrect” condom users and “inconsistent or non” users.

Discussion

This study suggests that oral contraceptive use, associated with poor condom use, exposed V-CSWs to STDs, especially chlamydial infection. In terms of condom use both for prevention of STDs and contraceptive purposes, the results of this study are similar to those of a study of CSWs in Jakarta, Indonesia conducted by Sedyaningsih, in which CSWs who had ever-used condoms for family planning purposes were nine times more likely to use condoms consistently. This study also found that the CSWs who were most experienced in negotiating condom use were five times more likely to use them consistently than those who were least experienced.¹¹

We did not refer to condom use with private partners in our study because only 3 out of 92 participants used condoms “consistently and correctly.” As reported by both Tchoudomirova et al.¹² and Wirawan et al.¹³, the low rate of condom use by CSW’s pimps/boyfriends needs to be recognized as a risk factor for HIV/STDs among CSWs. External determinants stemming from clients, brothel owners and/or managers also need to be taken into careful consideration, as condom use is not solely a matter of CSW volition.

Even when V-CSWs are free to use condoms (only 10 [10.9%] of 92 said they were restricted from doing so) “consistent and correct” condom use also involves support from owners of brothels and clients. The fact that 23 (25.0%) of the 92 V-CSW participants chose “clients are reluctant to use” (multiple answer) as a reason not to use condoms indicates the great impact clients have on condom use. Pickering et al. reported that condom use was determined more by the type of establishment and the characteristics of clients.¹⁴ Asamoah-Adu points out that an intervention in condom promotion targeted only at CSWs and not clients or brothel owners/managers was seriously limited.¹⁵ Furthermore, Van Haastrecht et al. report that consistent condom use occurs especially when an “employer” provides them, which may reflect the effectiveness of the “safe sex” policy followed in some European brothels.¹⁶ Similar findings emphasizing the influence of the work establishment are reported from the Philippines¹⁷ and Thailand,¹⁸ while a successful intervention in condom promotion targeted not only at CSWs but also their clients and pimps was reported from Indonesia.¹⁹

While our study did not closely examine external determinants that prevent V-CSWs from using condoms to protect themselves from STDs, it became evident that V-CSWs who used oral contraceptives were less likely to use condoms “consistently and correctly.” Therefore, now that OCs are widely available in Japan, the message of “consistent and correct” condom use for STD prevention should be disseminated amongst all those who are either currently using or planning to use oral contraceptives in the future.

Though this study group is one of the most risky in terms of HIV/STDs, the findings of this study may give us clues as to how a possible HIV/STDs epidemic among the general

population could be prevented. Regardless of the fact that condom use in Japan has historically been a male-dominant birth control tool, as long as we live in the HIV era its importance cannot be overemphasized.

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Table 1 Association between sociodemographic characteristics, sexual behaviors, reproductive history and risk of "incomplete" use of condom with clients among vaginal CSWs in Osaka, Japan

Variables		"Incomplete"		Age-adjusted	
		users	%	odds ratio	95% CI
Age	Mean 31.5 (SD 6.8) (range 19-49)				
	<30 years old (n=38)	32	84.2	1.00	reference
	30-39 years old (n=43)	37	86.0	1.16	0.34-3.94
	40 years old or over (n=11)	8	72.7	0.50	0.10-2.45
Years of education					
	<12 years (n=22)	20	90.9	1.00	reference
	12 years (n=45)	36	80.0	0.48	0.09-2.69
	>12 years (n=24)	20	83.3	0.49	0.08-3.01
	N.A. (n=1)				
Length of career as CSW					
	<1 year (n=15)	13	86.7	1.00	reference
	1-2 years (n=20)	17	85.0	0.87	0.13-6.01
	3-5 years (n=17)	13	76.5	0.53	0.08-3.46
	5 years or more (n=40)	34	85.0	1.24	0.19-7.87
Working days/month					
	< 10 days (n=8)	7	87.5	1.00	reference
	10-14 days (n=15)	13	86.7	0.77	0.06-10.49
	15-19 days (n=42)	34	81.0	0.54	0.06-5.16
	>19 days (n=27)	23	85.2	0.69	0.06-7.51
Working time/day					
	<6 hours (n=18)	14	77.8	1.00	reference
	6- <8 hours (n=24)	20	83.3	1.38	0.29-6.53
	8 hours or more (n=49)	42	85.7	1.64	0.41-6.48
	N.A. (n=1)				
Number of clients/day					
	1-3 clients (n=34)	28	82.4	1.00	reference
	4-5 clients (n=47)	40	85.1	1.13	0.34-3.79
	6 or more clients (n=10)	9	90.0	1.40	0.13-14.68
	N.A. (n=1)				
Income/day (US\$1=110 yen at the time of the study)					
	<30,000 yen (n=20)	16	80.0	1.00	reference
	30,000-49,999 yen (n=29)	25	86.2	1.58	0.34-7.32
	50,000 yen or more (n=42)	17	89.5	1.06	0.26-4.34
	N.A. (n=1)				
Partners in private life over the previous year					
	no partner (n=15)	10	66.7	1.00	reference
	one partner (n=53)	45	84.9	2.75	0.72-10.52
	2 or more partners (n=24)	22	91.7	5.22	0.76-35.90
Oral contraceptive use					
	non-user (n=31)	22	71.0	1.00	reference
	user (n=59)	54	91.5	5.47	1.53-19.52
	N.A. (n=2)				
Induced abortion					
	no (n=31)	26	83.9	1.00	reference
	yes (n=59)	49	83.1	0.98	0.30-3.20
	N.A. (n=2)				

N.A.: not available, SD: standard deviation, CI: Confidence Interval

Note: "incomplete" condom use includes all but "consistent and correct" use.

Table 2 Proportion of CSWs diagnosed with sexually transmitted diseases either currently or over the previous year by age group

Sexually transmitted diseases	Age group (years)							
	<30 (n=38)		30-39 (n=43)		>40 (n=11)		Total (n=92)	
	Number	%	Number	%	Number	%	Number	%
Chlamydial infection	14	36.8	17	39.5	5	45.5	36	39.1
Candidiasis	12	31.6	13	30.2	6	54.5	31	33.7
Genital herpes	10	26.3	13	30.2	0	0.0	23	25.0
Trichomoniasis	4	10.5	5	11.6	0	0.0	9	9.8
Gonorrhea	2	5.3	1	2.3	1	9.1	4	4.3
Syphilis	0	0.0	2	4.7	2	18.2	4	4.3
Phthiriasis pubis	0	0.0	2	4.7	1	9.1	3	3.3
Condyloma acuminatum	1	2.6	0	0.0	0	0.0	1	1.1

Table 3 Relationship between condom use with clients and chlamydial infection among vaginal CSWs in Osaka, Japan

Condom use with clients	Chlamydial infection * (n=36)				
	Number	%	Odds ratio	95% CI	<i>p</i>
"inconsistent" users or non-users (n=52)	24	67	1.00	reference	
"consistent but incorrect" users (n=25)	11	31	0.92	0.35-2.39	0.859
"consistent and correct" users (n=15)	1	3	0.08	0.01-0.68	0.020
Total	36	100			

CI: Confidence Interval

* Chlamydial infection diagnosed currently or over the previous year

Note: Condom use with clients: "consistent and correct" users are those who use condoms "always" and "from beginning to end so that the mouth, genitalia and anus does not touch the client's genitalia directly" which is regarded as "correct" use. "Consistent but incorrect" users are those who use condoms "always" but "just before insertion or ejaculation," which is regarded as "incorrect" use.

Table 4 Multivariate logistic regression analysis of associated variables with "incomplete" condom use with clients among vaginal CSWs in Osaka, Japan

Variables	Odds ratio	95% CI
Age	0.93	0.84-1.03
Years of education		
<12 years	1.00	reference
12 years or more	0.41	0.07-2.45
Length of career as CSW		
<1 year (n=15)	1.00	reference
1-2 years (n=20)	0.90	0.09-9.27
3-5 years (n=17)	0.40	0.04-3.97
5 years or more (n=40)	1.30	0.14-11.95
Income/day (US\$1=110 yen at the time of the study)		
<30,000 yen	1.00	reference
30,000-49,999 yen	0.73	0.11-4.68
50,000 yen or more	0.66	0.10-4.51
Oral contraceptive use		
no	1.00	reference
yes	5.69	1.43-22.66

CI: Confidence Interval

Note: "incomplete" condom use includes all but "consistent and correct" use.

Chapter 3

Clinical Genital Herpes and Associated Factors among Vaginal Commercial Sex Workers in Osaka, Japan

Introduction

Genital ulcer diseases such as syphilis, chancroid and genital herpes play an critically important role in facilitating the heterosexual transmission of HIV.¹⁻³ In Japan, as in other developed countries, genital herpes is the most prevalent genital ulcer disease among the three mentioned above⁴

The Centers for Disease Control and Prevention (CDC) has published the following information about genital herpes: it is a recurrent, incurable viral disease; two serotypes of the herpes simplex virus (HSV), HSV-1 and HSV-2, have been identified; most cases of recurrent genital herpes are caused by HSV-2; most patients having a first-episode genital HSV-2 infection will have recurrent episodes of genital lesions.⁵

Genital herpes is very common in the United States: on the basis of serologic studies it is estimated that 45 million people aged 12 and older have been diagnosed with it.⁶ Hashido et al. examined the seroprevalence of HIV-2 in Japan and reported that it was highest among CSWs (80%), lowest among pregnant women (7%), and intermediate in STD patients (23%) and homosexuals (24%). They concluded that prostitution is a risk factor for HSV-2 infection.⁷ However, in predicting the impact of genital herpes on the future spread of HIV in the sex industry setting, it is also important to know the factors associated with the recurrence of the disease. It has also been reported recently that seropositivity for HSV-2 is associated with viral shedding, even in subjects with no reported history of genital herpes.⁸ This fact is important in terms of HSV-2 transmission from V-CSWs to male clients.

We found no publication in the indexed literature regarding the risk factors of genital herpes among V-CSWs in Japan. Japan's Anti-Prostitution Law makes it difficult to survey V-CSWs; therefore, our study was conducted in a limited clinical setting, to explore the present situation of clinical genital herpes among V-CSWs. Nevertheless, the our findings may help to prevent both primary infection and recurrence of genital herpes and to reduce the risks for acquiring HIV in the future among subgroups at high risk.

Methods

The responses of a total of 92 V-CSWs who identified themselves on the questionnaires as "sex workers at bathhouses," "sex workers in former red light districts," "on-call sex massage providers" or "call girls"--categories of sex workers who generally service vaginal intercourse--were analyzed. Genital herpes was diagnosed clinically by its signs and symptoms. It is not known whether the clinically diagnosed genital herpes over the previous year was the primary episode or a recurrence.

Data analyses

Logistic regression model was used to measure the risks for a current and/or previous history of clinical genital herpes. X^2 test was used to analyze the relationship between the variables. Analyses were done with Statistical Package for Social Science (SPSS) Version 10.0 J for Windows.

Results

In total, 23 (25%) out of 92 V-CSWs in the study group had a current and/or previous year's history of clinical genital herpes. Three (3.3%) were clinically diagnosed with genital herpes at the time of survey; two of them and twenty other V-CSWs answered that they had ever been diagnosed over the previous year.

Associated variables with a current and/or previous year's history of clinical genital herpes are shown in Table 1. Younger age, longer working hours per day, and average daily income of 50,000 yen (US\$455 at the time of survey) or more were significantly associated with a current and/or previous year's history of clinical genital herpes. Variables not associated with this outcome were years of education, length of career as CSW, working days per month, number of clients per day, condom use with clients, partners in private life over the previous year, oral contraceptive use, and at least one experience of induced abortion. After controlling for income, condom use with clients and oral contraceptive use, younger age is associated with the outcome; after controlling for age group, condom use with clients and oral contraceptive use, average daily income of 50,000 yen or more was significantly associated with the outcome. As working hours is significantly associated with income (X^2 , $p=0.001$), it was not entered in the multiple logistic regression model.

No other current or previous history of other STDs studied were associated with that of genital herpes in our study.

Discussion

Genital herpes is usually transmitted sexually and initial infection is frequently followed by recurrent attacks at irregular intervals, often over a period of many years.⁹ However, recurrences are usually most noticeable within the first year of the initial episode.¹⁰ Our study showed that the youngest age group among the V-CSWs studied, 19-24 years old ($n=10$), is at higher risk for a current and/or previous year's history of clinical genital herpes. Although it is not known whether the episode was primary or recurrent, on the basis of the extremely high prevalence of HIV-2 among V-CSWs in Hashido's study,⁷ most of the episodes are assumed to be recurrent.

Out of 10 CSWs aged 19-24, 7 (70%) had worked less than 2 years as a V-CSW. This indicates that the recurrences occur at the early stage of their professional V-CSW life. It also

suggests that the longer they work as V-CSWs, the more controlled the clinical manifestations become. Intervention at a very early stage of their professional life or even before it starts should be implemented so that V-CSWs do not get infected with HSV-2. The CDC recommends the consistent and correct use of condoms as the best way to prevent HSV-2 infection. A second intervention by implementing effective therapies, such as episodic and suppressive antiviral therapies to reduce the burden of recurrence after the first episode, are necessary among the youngest age group.

Our study showed that the CSWs who earn an average of 50,000 yen or more per day are more likely to have a current and/or previous year's history of clinical genital herpes. Higher income was significantly associated with longer working hours ($p=0.001$); long working hours imply excessive friction in the genital area and increased stress, which can cause recurrences.

The CSWs who participated in this study are mostly brothel-based: no street sex workers visited the clinic during the study period, which clearly shows the limitations of a clinic-based study. Conde-Glez, et al. reported that in Mexico urban CSWs who originally came from rural areas are at higher risk in terms of HSV-2 prevalence. A safer sex message needs to be urgently conveyed to the street sex workers and illegal migrant sex workers in Japan with the cooperation of the police, prefectural and city health offices, and STD clinics.¹¹

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Table 1 Associated variables with a current and/or previous year's history of clinical genital herpes among vaginal CSWs in Osaka, Japan

Variables	History with genital herpes	%	Crude odds ratio	95% CI
Age				
mean 31.5 (SD 6.8) (range 19-49)				
19-24 (n=10)	6	60.0	1.00	reference
25-29 (n=28)	4	14.3	0.11	0.02-0.58
30-34 (n=27)	7	25.9	0.23	0.05-1.08
35 years old or over (n=27)	6	22.2	0.19	0.04-0.90
Years of education				
<12 years (n=22)	6	27.3	1.00	reference
12 years (n=45)	11	24.4	0.86	0.27-2.75
>12 years (n=24)	6	25.0	0.89	0.24-3.32
N.A. (n=1)				
Length of career as CSW				
<1 year (n=15)	1	6.7	1.00	reference
1-2 years (n=20)	5	25.0	4.67	0.48-45.02
3-5 years (n=17)	6	35.3	7.63	0.80-73.11
5 years or more (n=40)	11	27.5	5.31	0.62-45.30
Working days/month				
< 20 days (n=65)	16	24.6	1.00	reference
20 days or more (n=27)	7	25.9	1.07	0.38-3.00
Working time /day				
<6 hours (n=18)	1	5.6	1.00	reference
6-<8 hours (n=24)	3	12.5	2.43	0.23-25.47
8 hours and more (n=49)	19	38.8	10.76	1.32-87.53
N.A.				
Number of clients/day				
>5 clients (n=61)	14	23.0	1.00	reference
5 clients or more (n=30)	9	30.0	1.44	0.54-3.84
N.A.				
Income/day (US\$1=110 yen)				
<50,000 yen (n=49)	6	12.2	1.00	reference
50,000 yen and more (n=42)	17	40.5	4.87	1.70-13.98
N.A.				
Condom use with clients				
"consistent and correct" users (n=15)	2	13.3	1.00	reference
"consistent but incorrect" users (n=25)	4	16.0	1.24	0.20-7.73
"inconsistent" users or non-users (n=52)	17	32.7	3.15	0.64-15.58
Partners in private life over the previous year				
no partner (n=15)	4	26.7	1	reference
one partner (n=53)	12	22.6	0.81	0.22-2.99
2 partners or more (n=24)	7	29.2	1.13	0.27-4.80
Oral contraceptive pill use				
non-user (n=31)	4	12.9	1.00	reference
user (n=59)	19	32.2	3.21	0.98-10.48
N.A. (n=2)				
Induced abortion				
no (n=31)	6	19.4	1.00	reference
yes (n=59)	16	27.1	1.55	0.54-4.47
N.A. (n=2)	1			

N.A.: Not Available, SD: Standard Deviation, CI: Confidence Interval

Condom use with clients: "consistent and correct" users are those who use condoms "always" and "from beginning to end so that the mouth, genitalia and anus does not touch the client's genitalia directly" which is regarded as "correct" use. "Consistent but incorrect" users are those who use condoms always but "just before insertion or ejaculation," which is regarded as "incorrect" use.

Table 2 Multivariate logistic regression analysis of associated variables with a current and/or previous year's history of clinical genital herpes among vaginal CSWs in Osaka, Japan

Variables		Adjusted odds ratio	95% CI
Age	19-24 years old	1.00	reference
	25-29 years old	0.07	0.01-0.50
	30-34 years old	0.16	0.02-1.20
	35 years old or over	0.16	0.02-1.17
Income/day (US\$1=110 yen)			
	<50,000 yen	1.00	reference
	50,000 yen and more	5.17	1.59-16.76
Condom use with clients			
	"consistent and correct" users	1.00	reference
	"consistent but incorrect" users	0.74	0.09-6.08
	"inconsistent" users or non-users	1.62	0.23-11.63
Oral contraceptive use			
	non-user	1.00	reference
	user	4.24	0.86-20.93

CI: Confidence Interval

Chapter 4

Risk Assessment for Chlamydial Infection and HIV among Non-Vaginal Commercial Sex Workers in Osaka, Japan

Introduction

The growing awareness of HIV/AIDS among the general population in the mid-1980s played a key role in spawning a new type of sex industry that offers manual stimulation, cunnilingus and fellatio, culminating in ejaculation in the oral cavity. Non-vaginal commercial sex workers (NV-CSWs) and their clients believe that oral sex is much safer than vaginal intercourse in terms of sexually transmitted disease (STD) infection, including HIV. In addition, Japan's Anti-Prostitution Law, which was enacted in 1956 and essentially prohibits both organized and individual sex work in which vaginal intercourse is involved, does not apply to non-vaginal sex services. Nor are they prohibited under the Entertainment Establishments Regulation Law, which mainly regulates its location and hours of operation. Consequently there has been a dramatic change in Japan's sex industry since the 1980s, especially in urban areas where traditional commercial sex workers are being marginalized by those who do not offer vaginal intercourse.

In 1992, Louis pointed out that the oral sex industry's brilliance is in sexually satisfying men legally at a low price, while attracting more women to the work because it does not involve sexual intercourse.¹ Therefore NV-CSWs need be understood within the overall context of social change and a sexually active young generation, and not as a reserve population for traditional sex workers. In their CSW study, Ikegami et al. decided to recruit co-researchers only among NV-CSWs;² the strong positive response she received reflects the changing sex work concept among NV-CSWs, as well as the easy accessibility to this population due to the legality of non-vaginal sex work.

However, the occupational hazards of non-vaginal sex services, in particular oral sex without condoms, are largely unknown, though the literature on oro-genital transmission of STDs includes a report that *Chlamydia trachomatis*, *Haemophilus ducreyi*, and *Neisseria meningitidis* have been found in throat material following oral sex.³ Our study was conducted to assess the risks for STDs among NV-CSWs and to support the development and implementation of intervention programs for the prevention of STDs and HIV among this population.

Method

Study group

To assess the risks for STDs among NV-CSWs, we excluded 92 whose service involved vaginal intercourse. Those classified as NV-CSWs included: 256 working at "fashion health massage parlors", 87 at "pink salons", 18 at *imekuras* (image clubs), and 2 at S&M clubs. The final study group consisted of 363 NV-CSWs.

Statistical analyses

A logistic regression model was used to determine crude and age-adjusted odds ratios for chlamydial infection. Analyses were done with Statistical Package for Social Science (SPSS) for Windows Version 10.0 J.

Results

Sociodemographic characteristics and working conditions

The NV-CSWs' sociodemographic characteristics and working conditions are shown in Table 1. Approximately two-thirds of the NV-CSWs were under 25 years old (average: 23.8 years) and had worked less than one year as a NV-CSW. Seventy-seven percent had a high school education or higher, 69% worked more than 14 days a month, and 79% worked 6 hours a day or longer. Sixty-five percent served more than 5 clients per day, while 29% served more than 8 clients a day. Eighty-six percent spent less than 45 minutes with each client, and 66% earned 30,000 yen (US\$ 273 at the time of survey) per day or more.

Sex behavior and reproductive history of non-vaginal sex workers

The NV-CSWs' sex behaviors and reproductive history are shown in Table 2. Sixty-nine percent experienced first sexual intercourse by 18 years old and 93% had done so before age 20. In performing oral sex with clients, including ejaculation in the oral cavity, 90% did not use condoms or used them inconsistently. Fifty-eight percent had more than one private sexual partner over the previous year and 20% had at least 5 partners. Eighty-one percent did not use condoms with private partners or used them inconsistently. Only 9 percent were using oral contraceptives (at the time of survey, oral contraceptives could not be prescribed for contraceptive purposes); 49% had never been pregnant, while 40% had had at least one induced abortion.

Prevalence of HIV and chlamydial infection and associated variables

All study participants were HIV seronegative. Out of 363 NV-CSWs, 356 were tested for chlamydial infection and 79 (22%) were positive. The personal variables of the CSWs associated with chlamydial infection are shown in Table 3. Teenagers (18 and 19 years old), those who had worked as an NV-CSW less than one year, those who had had five private partners or more over the previous year, and those who had not experienced induced abortion were significantly more likely to test positive. After controlling for age, those who had worked as an NV-CSW for less than one year (OR 3.35, CI 1.22-8.99) and those who had 5 private partners or more over the previous year (OR 2.52, CI 1.21-5.23) were significantly more likely to be infected.

Why NV-CSWs did not use condoms (Multiple answers)

The reasons why NV-CSWs did not use condoms with either clients or private partners are

given in Table 4. Fifty-four percent of the NV-CSWs answered that condom use in oral sex is essentially prohibited by brothel owners, while 12% answered that clients are reluctant to use them. Twenty-two percent answered that they had never even thought of using condoms with private partners, and 19% answered that partners were reluctant to use them.

Discussion

From the sociodemographic data of this study group, and especially from the fact that their average age was 24 years old and that 61% of them had worked less than one year in the sex industry, the study findings should be understood within the context of a sexually active general population rather than within the traditional CSW framework. In other words, it may reflect a dramatic increase in a casual and recreational attitude towards sex and sexual partners among young women nationwide. Therefore, our study findings also provide valuable information on the sex behaviors and STDs among the young sexually active population, who are generally difficult to survey.

The high prevalence of chlamydial infection (22%), in particular among teenaged NV-CSWs (40%), is indicative of the chlamydial epidemic in Japan. That none of the participants were HIV seropositive reflects the current low prevalence of HIV. Koroku et al. reported that the detection rate of the *Chlamydia trachomatis* antigen was 5.6% (615 out of 10,980 cases) for married and 15.2% (272 of 1,792 cases) for unmarried pregnant women in Hokkaido who underwent induced abortion between 1986 and 1993.⁴ They also reported that the detection rate increased as the age of the subjects decreased, as suggested in other reports from developed countries such as the US, Canada and UK, where chlamydial infection is the most common bacterial STD. Furthermore, since chlamydial infection is often asymptomatic, screening programs for females under 25 years old are highly recommended to prevent Pelvic Inflammatory Disease (PID), ectopic pregnancy, infertility and other complications.⁵⁻⁸

It is noteworthy that with private partners, only 8.5% of the participants were consistent condom users. It is even more surprising that 22% answered that they had never even thought of condom use, which may also reflect the unprotected sex behavior among young women in general. In addition, those who had 5 or more partners over the previous year were 2.5 times as likely to be infected with *Chlamydia trachomatis* after age was controlled. Early education for safer sex is urgently required when adolescents begin sexual activity, as Ford et al. reported.⁹

However, the considerably higher prevalence of chlamydial infection among the study group than the general population may be attributed to excessive exposure through non-vaginal sexual services; in other words, it may be an indirect occupational hazard. One possibility is that NV-CSWs are infected with STDs in the oral cavity or throat by clients; they then infect their private partners by fellatio, and are in turn infected in their reproductive tracts by vaginal

intercourse without the use of condoms. In fact, the importance of using condoms in oral sex was pointed out by the CSW movement as far back as 1986.¹⁰ Brothel owners as well as clients and NV-CSWs should be involved in educational programs to understand the risks of oro-genital transmission of chlamydial infection and other infections such as gonorrhea, genital herpes and human papilloma virus (HPV) infection.

Controlling the chlamydial infection epidemic is especially important for preventing HIV infection, because it can facilitate HIV transmission.^{11,12} Population-based intervention programs, including chlamydial-infection screening for young females, are urgently required to prevent the entry of HIV to this population.

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Table 1 Sociodemographic characteristics and working conditions of non-vaginal commercial sex workers in Osaka, Japan

		n=363 Number	%
Age	mean 23.8 (SD 4.9) (range18-46)		
	<20 years old	73	20.1
	20-24 years old	160	44.1
	25-29 years old	88	24.2
	30 years old or more	42	11.6
Years of education			
	<12 years	81	22.3
	12 years	168	46.3
	>12 years	112	30.9
	N.A.	2	0.6
Length of career as CSW			
	<1year	222	61.2
	1- <3 years	92	25.3
	3 years or more	48	13.2
	N.A.	1	0.3
Working days/month			
	<10 days	81	22.3
	10-14 days	31	8.5
	15-19 days	51	14.0
	20 days or more	199	54.8
	N.A.	1	0.3
Working time/day			
	<6 hours	74	20.4
	6-<8 hours	241	66.4
	8 hours or more	46	12.7
	N.A.	2	0.6
Number of clients/day			
	1-5 clients	124	34.2
	6-8 clients	132	36.4
	9 clients or more	104	28.6
	N.A.	3	0.8
Time/client			
	<45 minutes	311	85.7
	45 minutes or more	50	13.8
	N.A.	2	0.6
Income/day (US1\$=110 yen)			
	<30,000 yen	120	33.1
	30,000-49,999 yen	172	47.4
	50,000 yen or more	67	18.5
	N.A.	4	1.1

SD : standard deviation N.A. : not available

Table 2 Sex behaviours and reproductive history of non-vaginal commercial sex workers in Osaka, Japan

	n=363 Number	%
Age at first intercourse		
<16 years old	76	20.9
16-17 years old	174	47.9
18-19 years old	88	24.2
20 years old or over	20	5.5
N.A.	5	1.4
Condom use at first intercourse		
yes	165	45.5
no	167	46.0
N.A.	31	8.5
Condom use with clients		
"consistent and correct" users	5	1.4
"consistent but incorrect" users	3	0.8
"inconsistent or non" users	328	90.4
N.A.	27	7.4
Partners in private life over the previous year		
no partner	26	7.2
1 partner	122	33.6
2-4 partners	139	38.3
5 partners or more	72	19.8
N.A.	4	1.1
Condom use with private partners		
no partner	26	7.2
"consistent and correct" users	7	1.9
"consistent but incorrect" users	24	6.6
"inconsistent or non" users	294	81.0
N.A.	12	3.3
Oral contraceptive pill use		
user	21	5.8
non-user	331	91.2
N.A.	11	3.0
Induced abortion		
never pregnant	176	48.5
no	36	9.9
1time	81	22.3
2 times	34	9.4
3 times or more	32	8.8
N.A.	4	1.1

N.A.: not available

Note: Oral contraceptive pill use: "user" includes those who use pills regularly, while non-irregular users and non-users.

Table 3 Variables associated with chlamydial infection among non-vaginal commercial sex workers in Osaka, Japan

Variables	Chlamydial Infection				Age-adjusted OR	CI
	Number	%	Crude OR	CI		
Age						
<20 years old (n=73)	29	39.7	3.11	1.21-7.96		
20-24 years old (n=159)	26	16.4	0.92	0.37-2.31		
25-29 years old (n=84)	17	20.2	1.20	0.45-3.17		
30 years old or over (n=40)	7	17.5	1.00	reference		
Years of education						
<12 years (n=81)	20	24.7	0.97	0.50-1.89	0.93	0.48-1.82
12 years (n=163)	31	19.0	0.70	0.39-1.24	0.74	0.41-1.34
>12 years (n=111)	28	25.2	1.00	reference	1.00	reference
Length of career as CSW						
<1 year (n=220)	67	30.5	3.50	1.32-9.27	3.33	1.22-8.99
1- <3 years (n=90)	7	7.8	0.68	0.20-2.26	0.67	0.20-2.23
3 years or more (n=45)	5	11.1	1.00	reference	1.00	reference
Income/day (US\$=110 yen)						
<30,000 yen (n=120)	22	18.3	0.60	0.29-1.22	0.61	0.30-1.26
30,000-49,999 yen (n=166)	38	22.9	0.79	0.41-1.52	0.78	0.40-1.50
50,000 yen or more (n=66)	18	27.3	1.00	reference	1.00	reference
Age at first intercourse						
<16 years old (n=76)	20	26.3	1.90	0.50-7.23	1.42	0.36-5.59
16-17 years old (n=171)	38	22.2	1.52	0.42-5.51	1.18	0.32-4.40
18-19 years old (n=85)	17	20.0	1.33	0.35-5.11	1.09	0.28-4.27
20 years old or over (n=19)	3	15.8	1.00	reference	1.00	reference
Partners in private life over the previous year						
5 partners or more (n=71)	25	35.2	2.86	1.48-5.53	2.52	1.21-5.23
2-4 partners (n=138)	30	21.7	1.46	0.80-2.67	1.35	0.72-2.54
0 or 1 partner (n=144)	23	16.0	1.00	reference	1.00	reference
Oral contraceptive pill use						
user (n=21)	4	19.0	0.82	0.27-2.53	1.16	0.36-3.78
non-user (n=324)	72	22.2	1.00	reference	1.00	reference
Induced abortion						
yes (n=144)	23	16.0	0.52	0.30-0.89	0.58	0.33-1.01
no (n=208)	56	26.9	1.00	reference	1.00	reference

Table 4 Reasons non-vaginal commercial sex workers did use condoms (multiple answers)

	n=363	
	Number	%
With clients		
prohibited by employers	195	53.7
clients reluctant to use	43	11.8
CSWs themselves reluctant to use	6	1.7
afraid of decrease in income	4	1.1
doubtful of effectiveness in STD prevention	3	0.8
other	35	9.6
N.A.	22	6.1
With private partners		
partners reluctant to use	67	18.5
afraid of being disliked by partners	14	3.9
afraid of spoiling their own pleasure	32	8.8
doubtful of effectiveness in STD prevention	2	0.6
doubtful of effectiveness in birth control	1	0.3
never thought of using condoms	81	22.3
other	44	12.1
N.A.	8	2.2

N.A: not available

Chapter 5

Commercial Sex Workers' Participation in HIV/STD Control

1 Background

Controlling HIV among commercial sex workers (CSWs) is regarded as one of the most effective ways to limit the spread of HIV/AIDS in most countries, as heterosexual sexual intercourse is one of the major HIV transmission routes. Japan's STD control methods among CSWs were historically reviewed as an introduction to this study, in which it was shown that neither the licensed system with mandatory check-ups or the prohibition of prostitution did not effectively work to prevent STDs among the CSW population. It is also clear that CSWs are not likely to voluntarily participate in prevention programs in an atmosphere of stigmatization and victimization. This chapter introduces a new approach to CSWs' potential contribution to HIV/STDs prevention, which is discussed from the point of view of their volition and benefits.

2. The commercial sex workers' movement on decriminalization and health issues

Whether by socialist or conservative Christian activists, prostitution has always been viewed in the framework of victimization, never from the standpoint of sex workers' volition and benefits. No one did this until 1973, when COYOTE (Call Off Your Old Tired Ethics), a pioneer advocacy organization founded by sex workers in California, addressed the self-determination of sex workers.¹

Sex workers first addressed their rights worldwide in the form of the 1985 *World Charter for Prostitutes' Rights*.¹ In reference to health issues, it declares:

All women and men should be educated to have periodical health screening for sexually transmitted diseases. Since health checks have historically been used to control and stigmatize prostitutes, and since adult prostitutes are generally even more aware of sexual health care than others, mandatory checks for prostitutes are unacceptable unless they are mandatory for all sexually active people.

Their goal was voluntary access to medical check-ups and services without being criminalized. Ironically, the emergence of this movement has sharply divided feminists: one is against approving sex work as a profession, from the standpoint of human right's violation; the other recognizes sex work as a profession from the standpoint of self-determination. At the same time, the AIDS epidemic has made protecting CSWs from HIV infection an urgent issue, and this will require concrete steps to reduce the spread of HIV/AIDS among both CSWs and the general population.

Due to the world AIDS crisis, HIV/AIDS became one of the major topics at the 1986 Second World Whore's Congress in Brussels.² Participants declared that health authorities should disseminate information about safe sexual practices; in particular, condom use should be recommended for all vaginal, oral and anal sexual transactions. It is notable that these sex workers

were already aware of the importance of condom use in oral sex (as well as vaginal and anal sex) in the mid-1980s, at the early stages of the HIV/AIDS epidemic. They further said that integration of prostitutes in the medical and counseling services is essential for effective policy-making and service delivery, and that vocational counselors should respect a woman's decision to work as a prostitute. They added that leaving prostitution should never be a prerequisite for participation in counseling service for HIV/STD prevention.

Sixteen years after the *World Charter for Prostitutes' Rights* was declared, the International Sex Workers Millennium meeting was held in Calcutta in March 2001.³ It was attended by thousands of sex workers from India, Bangladesh, Cambodia, Indonesia, Malaysia, the Netherlands, Norway and Australia, as well as individuals and groups that supported them. The meeting addressed the issues of decriminalization, human rights and trafficking. In conclusion, they declared, "To support the rights of women in the sex industry is to support the rights of all women, and once sex workers are treated with respect and equality, are given rights to housing, health care and safe working conditions, no other woman will be entitled to anything less." They also maintained that the only way in which the harms and abuses in sex work and the problems of trafficking and HIV can be addressed is through the active participation and leadership of sex workers.

In Japan, UNIDOS (Uphold Now! Immediate De-criminalization of Sexwork!) was organized in Kyoto in 1998 by a coalition of intelligentsia and sex workers who support the decriminalization of sex work.

3. Decriminalization of sex work for future HIV/STD control in Japan

Japan's Anti-Prostitution Law prohibits all types of prostitution in principle, but punishes only those who publicly solicit clients; in other words, street CSWs, brokers (pimps), and those who help brokers financially or purposefully lend places for prostitution. Under such circumstances, street sex workers are likely to be driven underground and rarely visit STD clinics for screening purposes. Immigrant sex workers were not included in our study, but even if they visit an STD clinic for treatment, they rarely disclose their work or their names, and unless they are recipients of national medical insurance, they are not required to inform their doctors of their true work and identity.

According to the Prime Minister's Office, there is considerable overlap between immigrant sex workers and street sex workers.⁴ It can also be seen that the immigration laws and the Anti-Prostitution Law are often used complementarily to try to prevent HIV/AIDS epidemic among the Japanese population through exclusionism. For instance, the reported number of foreign females with HIV/AIDS was 18 in 1990, 105 in 1991, 274 in 1992, 129 in 1993. This progression neatly parallels that of the number of foreign female arrests for violating Chapter 5 (Solicitation) of

the Anti-Prostitution Law: 120 in 1990, 219 in 1991, 264 in 1992, 325 in 1993, 297 in 1994, and 198 in 1995.

It is also interesting that, included among those who are arrested on the street are a large number of mentally disordered or retarded women. This reflects another aspect of social defense in the Anti-Prostitution Law, which regulates the protection and rehabilitation of arrested women in a house of detention. A survey urgently needs to be and carried out among those immigrant and/or street workers who need language help or psychiatric assistance, to assess the risks of HIV/STD among these marginalized subpopulations.

O'Connor et al. compared both local and international sex workers (predominantly from Thailand) in Sydney, Australia, and reported that international sex workers are more likely to use condoms inconsistently than local sex workers, and that they consequently continue to be at high risk of STDs. They also found that sex workers who use condoms for contraception are more likely to use them with clients to prevent STDs. In addition, the authors pointed out the necessity of reviewing the immigration laws as they affect sex workers: since they move from one brothel to another or from one state to another to avoid scrutiny by immigration officials, they can be difficult to contact for safer sex education and for building support networks.⁵

Van Haastrecht et al. also found inconsistent condom use to be high among prostitutes and their clients who had migrated from Latin America to Amsterdam.⁶ The authors emphasized the importance of commitment by brothel owners and intervention among clients for safer sex practices with female sex workers.

In the decades since the Anti-Prostitution Law was enacted, prostitution has been consistently stigmatized by the authorities from the standpoint of social defense and modernization. It was not until 1994 that Japan's Prostitution Control Advisory Committee expressed their anxiety concerning a future HIV epidemic with sex workers as vectors. Up until then the Committee's major concern had been general moral decay and the immoral image prostitution would give Japan in the eyes of foreigners, especially at international events such as the 1964 Tokyo Olympic Games, the 1970 Osaka International Exposition, and the 1975 Okinawa International Marine Exposition. Although the committee admitted in 1986 that financial difficulty no longer provided a motivation for engaging in prostitution, it demanded that the Prime Minister strengthen crackdowns, as prostitution, for the first time, was spreading outside its historical populations into the general public, among housewives and teenagers.⁴

That the sex industry in Osaka has dramatically changed is consistent with its modernization. Bathhouse brothels in the center of city had changed into non-vaginal-type brothels, such as "fashion health massage parlors" and "pink salons," by the time the Osaka International Flower Exposition was held in 1990. And as non-vaginal sex services do not violate the Anti-Prostitution Law, more and more young women are freely choosing to become engaged in this

work. In our study, among a total of 455 sex workers, 363 (80%) were sex workers who did not offer vaginal intercourse.

Reporting on prostitutes in China, Gil et al. found that the “average” prostitute is from a rural area, usually prostituting in a city, young but well educated, and mostly free from the stereotypic home problems which the government views as causing prostitution.⁷ This study also revealed the highly endemic situation of certain STDs, like gonorrhea and Trichomoniasis, among arrested prostitutes. It suggests that Chinese government tactics, described in newspapers as a “War on prostitution” and a “War on flesh peddlers,” in fact had an opposite effect on STD control among this population.

It has also been observed in Northern Thailand’s matrilineal society that girls are proud of financially contributing to their parents by whatever means, including prostitution.⁸ It is also said that they are less stigmatized in the community than might be generally expected. While it could be dangerous to generalize the self-determining right for sex work from recent observations in developed or newly emerged countries, it is clear that there is a diverse range of motivation for entering sex work, even in developing countries.

4. Sex workers’ potential for contributing to HIV/STD Control

A point of controversy among feminists is that if they accept sex work as an established profession, this could maintain male structural dominance and the commercialization of women in the framework of the free market economy. Feminists and socialists have long viewed sex workers as victims of a Japan’s patriarchy which allows men to have a double standard of sexuality. They have thus targeted prostitution as an issue that should be eliminated. However, it is not realistic to assume that prostitution can be eradicated in the near future. Furthermore, stigmatization and victimization are two sides of the same coin and can drive sex workers into a corner. It is therefore risky for feminists and socialists to cooperate with Christian activists who have stigmatized sex workers as “women engaged in ugly work.” This makes sex workers even further isolated from society and even more reluctant to link their benefits with those of society.

Pheterson writes in *Sex Work*:

Disease, like violence, is often blamed on the unchaste. The whore stigma has been defined as *a mark of shame or disease on an unchaste woman...*

Unchastity is assumed to begin with the whores and spread from them to chaste society via men. The triangle between ‘dishonorable whore’ and ‘unworthy husband’ and ‘chaste wife’ is most clearly drawn by assumptions of sexual disease transmission.²

These types of assumptions are clearly not useful for society, because they actually impede sex workers from taking the initiative in controlling HIV/STDs.

The higher prevalence of STDs among sex workers than the general population reflects the endemic situation of the society; from a public health viewpoint, it is not because they are unchaste but because they are more exposed to risk than the general population. The prevalence of HIV/STDs among sex workers can be seen an indicator of the society's endemic stage of HIV/STDs. Sex workers are more aware of HIV/STDs, and they should be encouraged to participate in tackling the HIV/STDs situation as educators. Though Ikegami et al. only studied non-vaginal CSWs, it was the first research work in Japan in which sex workers voluntarily worked as interviewers with the Research Group on HIV Epidemiology of the Ministry of Health and Welfare.⁹ As the Anti-Prostitution Law does not apply to non-vaginal sex work, these workers could possibly play an important role in educating sex workers of all kinds.

UNAIDS has supported the activities of the Thai NGO "EMPOWER", established in 1985, which runs successful programs for sex workers. At its drop-in centers in Bangkok and Chaing Mai, educational classes are offered in many areas such as English, creative expression and different skills (e.g. sewing, typing). In a nonjudgmental atmosphere, the women gather as a community to change their situation in the industry. HIV/AIDS awareness is incorporated into all projects, including a newspaper that addresses CSWs' experiences and concerns, outreach work where condoms and information are distributed at worksites, and projects to enforce CSWs' rights."¹⁰ Remarkable activities are also reported in Europe (the Netherlands, Italy, Germany and Austria), Calcutta and Kenya. These successful programs in which sex workers work voluntarily indicate that their participation is invaluable in teaching and spreading safer sex practices among the CSW population and their clients.

5. Concluding reflections

Reducing the impact of the HIV/AIDS epidemic will require genuine international cooperation on practical steps and deep understanding of the human rights of each individual, regardless of HIV status or profession. Vigorous commitment by government is urgently required in every country in the world. The voluntary participation of sex workers in this international cooperation will be invaluable for preventing HIV infection among this population, as sex workers are highly mobile. In calling for the decriminalization of prostitution, UNAIDS guidelines¹⁰ are consistent with the International Committee for Prostitutes' Rights World Chapter. Abolishing Japan's Anti-Prostitution Law and related laws should be discussed, particularly at the international level, as the most vulnerable group among sex workers are, according to the literature, probably migrant foreign workers.^{5,6}

Japan's Anti-Prostitution Law was enacted in the 1950s in the early days of the

international human rights movement and was also seen as a victory for the nascent women's rights movement. It was welcomed by all parties except the licensed sex workers themselves and some small left-wing groups. It is also evident that the sex industry has continued to change over the centuries in Japan and elsewhere, and that it is extremely adept at exploiting legal loopholes. What is different today is the emergence of the HIV/AIDS epidemic, which urgently requires a better solution, though not necessarily an ideal one. In our search, we need to separate the ideological from the pragmatic and remember that, in this situation, the best is the enemy of the good, as Voltaire put it.

Our study showed some obstacles for safer sex practices among brothel-based sex workers, but these can be solved by educating sex workers, clients and brothel owners. However, the Anti-Prostitution Law and others which make it difficult for freelance street workers and immigrant workers to seek appropriate information on social and medical services, need to be abolished. The participation of sex workers in promoting safe sex practices that will lessen the spread of HIV/AIDS is essential.

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