1. Introduction

The study of the safety of sex workers in the sex industry is complicated by several factors. The industry operates in an illegal environment, and even where prostitution is formally legalised certain sectors of the industry remain illegal. For example, in Victoria brothel prostitution is legal whereas street prostitution is not. Because of these variations in legality, obtaining accurate information from sex workers about their risk behaviours, typically by self-report, is very difficult. For example, self-reported drug abuse may have negative ramifications for the sex worker who may believe that such disclosure could expose her to legal consequences. Furthermore, the pursuit for legitimacy by many within the industry, or those associated with it, has the potential to distort data collection and interpretation, especially where an adverse finding about harms or risks may work against the stated goal of legalised prostitution.

Safety issues for sex workers can be categorized under the following headings: sexually transmitted infections (STIs); drug abuse; physical, social and sexual abuse; mental illness and psychological harm; and other health issues.

2. Sexually transmitted infections

2.1 The influence of condom use

The risk of transmission of STIs, particularly HIV, is complex. Many factors are at play, not only condom use during commercial sex, but also the immune status of client and worker, sexual practices (particularly anal intercourse), frequency of sex, intravenous drug use, sex with non-paying partners, and history of other STIs.\(^1\) Condom use itself is complex; ‘correct’ and ‘consistent’ use are difficult to define and to accurately determine through survey work.

A meta-analysis by Weller\(^2\) concludes that condom users exposed to HIV will be about a third as likely to become infected as similarly exposed individuals practicing ‘unprotected’ sex, i.e. 69% effectiveness. She notes that, taking account of uncertainties inherent in the collected research, true effectiveness could be as low as 46% or as high as 86%. In response to this, a later meta-analysis criticised Weller’s study for failing to distinguish consistent use from occasional use, and concluded that with consistent use, effectiveness could reach 85%.\(^3\) Most

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1. For example, Weller cites a large European collaborative study which found that “when the clinical state of the index patient, the practice of anal intercourse, and a history of sexually transmitted disease are considered, condom use no longer significantly reduced HIV transmission.” Weller SC, A meta-analysis of condom effectiveness in reducing sexually transmitted HIV. *Soc Sci Med* 36(12):1635-44, 1993.


recently, a Cochrane review published in 2003 found that consistent use of condoms results in an 80% reduction in HIV transmission.\textsuperscript{4}

However it is important to realise that studies of commercial sex workers were excluded from all three of these studies on the grounds that individual exposure cannot be determined. Therefore these results cannot apply to the sex industry.

More relevant is a report by the National Institutes of Health, in conjunction with other major US health bodies\textsuperscript{5}, on the effectiveness of condoms during vaginal intercourse for prevention of STIs.\textsuperscript{6} A wider range of research was included in this analysis, including data on commercial sex workers. The panel found that the available literature was inadequate and therefore whether condoms were effective in preventing STIs during vaginal intercourse could not be known. They were only able to conclude that consistent and correct use of condoms could reduce HIV infection by 85% in men and women, and reduce gonorrhoea infections, but only in men. They could draw no other conclusions regarding a range of other STIs. It should be noted that ‘correct and consistent’ use of condoms does not always accurately characterise condom use by sex workers.\textsuperscript{7}

In any case, studies relevant to the sex industry do not consistently show that increased condom use is associated with a decrease in STIs. Most studies demonstrate a reduced incidence of selected infections with increased condom use. But some studies which demonstrated significant increases in condom use over time also showed:

- increase in genital/anal warts among prostitutes in Sydney\textsuperscript{8}
- no association between condom use and gonorrhoea, chlamydia, and genital herpes in London prostitutes\textsuperscript{9}
- persistently high rates of chlamydia and \textit{c. trachomatis} infection rates among commercial sex workers in Japan\textsuperscript{10}
- condom use could not be isolated as a reason for declines in STIs, including HIV, among Zairian prostitutes\textsuperscript{11}
- the presence of STIs was not associated with number of clients, duration of prostitution, or condom failures, but with age and increasing number of non-paying partners among prostitutes in London\textsuperscript{12}

\textsuperscript{5} National Institute of Allergy and Infectious Diseases, Department of Health and Human Services, and the Center for Disease Control and Prevention.
\textsuperscript{6} National Institute of Allergy and Infectious Diseases, National Institutes of Health, and Dept of Health and Human Services (USA). Workshop summary: scientific evidence on condom effectiveness for sexually transmitted disease (STD) prevention. June 12-13, 2000, Hyatt Dulles Airport, Herndon, Virginia.
\textsuperscript{11} Laga M et al., Condom promotion, sexually transmitted diseases treatment, and declining incidence of HIV-1 infection in female Zairian sex workers The Lancet 344:246-48, 23 July 1994.
call girls in Sydney had lower levels of condom use and lower levels of STIs than brothel workers.\textsuperscript{13}

All studies considering condom use in prostitutes must be interpreted with care because researchers are never able to determine actual exposure to infection\textsuperscript{14}. Studies showing increased condom use over time are also frequently confounded by changes in sexual behaviour over time, particularly the number of contacts and types of sex act\textsuperscript{15}.

It is an observation of the authors of this paper that levels of risk and experience of diseases are often compared to other research findings within the sex industry (e.g. brothels versus street work, developed versus developing nations, changes over time), and not compared with the general population. This implies that a higher level of risk of harm, which would be unacceptable to workers in general, becomes acceptable for the working conditions of prostitutes.

2.2 STIs and regulation of commercial sex work

Most researchers conclude that since STIs (particularly genital ulcer disease) facilitate transmission of HIV, management of STIs is an integral part of HIV control. Many STIs are asymptomatic, so leaving health checks until symptoms appear is unwise.

It is also frequently assumed that regulation would allow commercial sex workers increased control over condom use and prevention of STI infection. But research in Victoria in 1996, where brothels have been legalised, showed that only 85% of prostitutes would refuse service, insist on condoms, or limit service, to a client with a suspected STI.\textsuperscript{16} Other research in New Zealand, where prostitution is not illegal, found that street workers were more often able to refuse a client, for example on grounds of demanding unsafe sex, than were brothel workers.\textsuperscript{17} Sydney call girls, who work alone without regulatory and organisational safety mechanisms, were found to be at no greater risk of STIs or violence than brothel workers.\textsuperscript{18}

Correct and consistent use of condoms is far from a simple matter, depending not only upon policy and availability of condoms, but also on the psychological state of the worker\textsuperscript{19}; worker initiative and control, and familiarity with client\textsuperscript{20}; cultural background\textsuperscript{22}; age and experience\textsuperscript{23}; and individual client characteristics.

In summary, there is no definitive evidence that condoms can prevent sexually transmitted disease of any type, including HIV. Condoms can certainly reduce the risk of HIV infection,

\textsuperscript{14} “Studies that have found a co-occurrence of a relatively high rate of condom usage and no HIV infection among prostitutes cannot legitimately conclude that the absence of HIV infection is due to condom use… it is quite possible that the women were not exposed.” Weller SC, 1993, \textit{Op. Cit.}
\textsuperscript{18} Despite this finding, researchers conclude that call girls are more vulnerable to hazards than their legalised brothel counterparts. Perkins R & Lovejoy F, 1996, \textit{Op. Cit.}
\textsuperscript{22} O’Connor CC et al., Sexual health and use of condoms among local and international sex workers in Sydney. \textit{Genitourin Med} 72:47-51, 1996.
with estimates ranging from 69-85%. However these estimates are based on data which specifically excludes studies of prostitutes. Commercial sex workers comprise a special population which is characterised by an extremely high frequency of sexual contact, and in which the risk of disease is influenced by multiple factors. The promotion of ‘safe sex’ practices, mostly involving provision and enforcement of condom use, is complicated and cannot guarantee a safe work environment for commercial sex workers. Here are some researchers’ comments on the promotion of condoms as ‘safe sex’:

- “It is a disservice to encourage the belief that condoms will prevent sexual transmission of HIV. Condoms will not eliminate the risk of sexual transmission and, in fact, may only lower risk somewhat.”
- “Condom-protected sex cannot be considered truly ‘safe’ sex.”
- A high lifetime risk of STIs “suggests that safer behaviour with clients does not eliminate risk of STIs [in London prostitutes]… condom use in commercial sex may not provide secure long-term protection.”

3. Drug abuse

A study of brothel workers in Sydney revealed the extent of illicit drug use in this legally sanctioned and regulated industry. Abuse of the following drugs is expressed as “in the past” and “currently” (in brackets): marijuana 59.7%(54.8%); heroin 24.2%(7.3%); cocaine 35.5%(12.1%); amphetamines 45.2%(23.4%); hallucinogens 33.1%(8.9%); designer drugs 25.8%(7.3%).

These figures are much higher than those in the community as a whole, and while it is difficult to make a direct comparison due to differences in the time periods covered by the questions asked about drug use, an initial comparison can be made. The following drugs were recently used in the general population “in the last 12 months”: marijuana 17.9%; heroin 0.8%; cocaine 1.4%; amphetamines 3.7%; hallucinogens 3.0%; designer drugs 2.4%. Therefore, where heroin, cocaine and amphetamines are concerned, all mostly injected, at least 6 times more brothel workers use “currently” than the general population “in the last 12 months”.

But to compare like with like, “currently” for sex workers needs to be compared with the closest category for the general population, that is, “once a week or more”.

When such a comparison is made, a more accurate picture emerges.

For example, heroin use of “once a week or more” for the general population is 0.22%. Therefore, whereas 0.22% of the general population used heroin “once a week or more”, 7.3% of brothel workers “currently” use heroin, that is about 33 times more. The same calculation for amphetamines yields a 59 times greater rate of use by sex workers, and for cocaine, 484 times greater.

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29 Ibid. 51.
30 Based upon amphetamine use “once a week or more” of 0.4% for the general population. Adhikari P & Summerill A, 1998 Op. Cit., 45-50.
31 Based upon cocaine use “once a week or more” of 0.025% for the general population. Adhikari P & Summerill A, 1998 Op. Cit., 56-61.
4. Physical, social and sexual abuse

Brothel workers experienced objectionable behaviour of the following form from clients: objection to condoms 9.7%; obsessive desire for a particular worker 53.2%; menaces and threats 12.1%; nuisance phone calls 21%; harassment without violence 21%; robbery without violence 4%; robbery with violence 4%; rape at work 6.5%; bashing or stabbing 7.2%32. Previous research showed much higher rates, with 20% of sex workers being raped at work, and 33% otherwise assaulted33. More recently, in a study of street workers in New South Wales, 75% reported experiencing violence at work34. In New Zealand, where prostitution is not illegal but some associated activities are, indoor (brothel) sex workers reported similar adverse experiences, including 46% of clients refusing to pay (after service given).35 These forms of abuse are not unexpected because the sex industry is characterized by inequality in the relationship between sex worker and client.36

5. Mental illness and psychological harm

A *prima facie* case could be made for expecting the psychological health of sex workers to be poor. The high levels of STIs, drug abuse and violence, coupled with societal disapproval, would be expected to adversely influence the mental well-being of sex workers. The authors of one study came to the following conclusion about the relationship between mental health and ‘safe sex’ behaviour: “Poor mental health and drug dependence may undermine the motivation and ability of these sex traders to adopt safer sex behaviour.”37 A similar study of male sex workers found even higher levels of psychological distress.38

6. Other health issues

Other health problems include: stress 60.5%; chronic fatigue 28.2%; emotional anxieties 33.1%; depression 36.3%; feelings of isolation 20.2%; loss of sexual pleasure 31.5%; bad diet 54%; lack of exercise 30.6%.39 It has also been observed that “the stress and stigma associated with sex work are likely to take a heavy toll on marriage and personal relationships.”40 In a study of Canadian street youth, most of whom were trading sex and 76% of whom had attempted suicide, a correlation was found between trading sex and suicidal experiences. Despite the fact that other themes in their lives such as isolation, rejection/betrayal, lack of control and low self-worth “formed the basis of their suicidal experiences”, the authors concluded that trading in sex may have accounted for the high suicide attempt rate.41

7. Interface between prostitution and the wider community

It is very difficult to obtain an accurate measure of the numbers of sex workers in a given population. In South Australia, the SA Sex Industry Network (SA SIN) estimates that there are approximately 700 sex workers currently trading in SA, 10% of whom are male. It is even more difficult to obtain an estimate of the numbers of clients seen by prostitutes in any given time period, particularly since it cannot be known how many different prostitutes a given client may see. On a very rough, and probably conservative, estimate of say 100 different clients seen each year by each prostitute, the total number of different clients in SA in one year could be about 70,000. Since nearly all of these will be male, this represents about 15 percent of the male population and therefore a significant interface with the broader community. Considering the fact that many of these males are likely to have other sexual partners including wives and de facto partners, the health impact on others is considerable. Non-paying sexual partners of sex workers may also be at risk, especially since prostitutes use condoms less frequently in sexual encounters with them. Conversely, sex workers themselves may be at risk of contracting STIs from these non-paying partners, and indeed it is often assumed that when sex workers have STIs they have most likely contracted them via this route.

8. Other questions related to possible legalisation of the trade

What are the costs of regular tests for STIs as mandated under legislation? Who bears the cost? If regular checks are demanded for street based prostitution as has been proposed for Victoria these costs would increase dramatically. Notably, both illegal brothels and street-based prostitution are still extensive despite the legalisation of brothel-based prostitution in Victoria. Nevertheless, mandatory screening for STIs (with notification and treatment if found positive) are seen by some as a form of undesirable social control, and a reason to avoid regulation.

9. Conclusion

The sex industry is one marked by a high level of inherent harm that has remained despite efforts to legalise the trade.

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42 Jenny Gamble, South Australian Sex Industry Network (SA SIN), personal communication.
43 At least three studies report approximately 10 clients per week as an average, although how many of these clients return in the following week or later is not known. In one of these reports one prostitute reported 198 clients in the week before the study. Perkins R & Lovejoy F, 1996, Op. Cit., Ward H et al., 1993, Op. Cit., Ward H et al., 1999, Op. Cit.