Epidemiology and etiology of sexually transmitted disease (STD) and HIV/AIDS among hotel-based workers in Karachi, Pakistan

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Background: The prevalence of sexually transmitted Disease (STDs) among hotel-based sex workers (HBSWs) in Karachi, Pakistan, was studied. These hotel workers are considered as high risk group because of their age, economic independence, low education and residence in a place away from their family. Objective: In poor countries, data on STDs and related complications are limited, which causes a substantial under estimation of the burden of these diseases. The aim of this study was to access in health care facilities for diagnosis and treatment of STDs. Material and Methods: The focus of this study was to understand the sexual behavior among categories of hotel workers in the context of HIV/AIDS and STD. 100 respondents were selected randomly from 25 different hotels from different parts of city and these were receptionists, waiters, room-service persons and security guard. Result: The 26 years of age of the responders were taken in this study. 37% of the subjects ever visited commercial sex workers, 80% of the subjects were un-married who visited hotel-based sex workers and never used condom, 3.3% used it consistently as 16.6% used occasionally. Only 3 hotels workers reported homosexual/bisexual experience. On further information 85% of all the responders had heard about AIDS and there were misconceptions. Conclusion: These data suggest that the time trends in HIV and STD prevalence are partly due to the changing sex work milieu. Prevention programme aimed at male sex workers should be highly prioritized and the screening program for HIV/AIDS and STD should be done.

Keywords: Sexual behavior, hotel employees, HIV/AIDS, Sexual transmitted disease (STD)

INTRODUCTION

Sexually Transmitted Disease (STDs), including HIV, continues to present major public health, social, and economic problem in developing countries, leading to considerable morbidity, mortality, and stigma. (Plot et al., 2001) More than 340 million cases of curable sexually transmitted infections (STIs) including Treponema pallidum, Neisseria gonorrhoeae, Chlamydia trachomatis and Trichomonas vaginalis were estimated to have
occurred worldwide in 1995 (WHO, 2007). Previous studies have shown that the presence of other concomitant STIs increases the likelihood of HIV transmission (White et al., 2008; Sangani et al., 2004; Cohen, 1998). Both ulcerative and non-ulcerative STDs have been identified as factors facilitating the sexual transmission of HIV. There is growing recognition of the public health importance of STDs because of the degree of morbidity and mortality they cause and the well-established evidence that STDs facilitate the transmission of infection with the human immunodeficiency virus (HIV).

In the past decade sufficient knowledge and expertise have been gathered in the fight against HIV/AIDS/STD to enable effective prevention and care interventions to be established. Not a single strategy can work on its own nor any nation can work in isolation in the fight against these diseases. A unified approach based on sound principles needs to be implemented globally, regionally and locally in order to have an appreciable impact.

HIV is a sexually transmitted disease (STD). HIV and other STDs (such as gonorrhea, syphilis, herpes, chlamydia and trichomoniasis), are all adverse consequences of sexual behavior. If someone is at risk for unintended pregnancy or common STDs, that means they are engaging in an activity that could also put them at risk for HIV. In addition, these STDs may increase the likelihood of HIV acquisition.

A smartly dressed couple check into a four-star city hotel armed with a bottle of champagne and condoms. In a building across the street, a couple who has just met is putting on a condom. In a parking lot of the local high school, in the backseat of a car, two young people, high on dope, are removing one after finishing sex. Out in the suburbs, a man puts one on before he has sex with his contact. HIV is most easily spread, or transmitted, passed from one person to another depend on the type of transportation system, another man is performing oral sex, are removing one after finishing sex. Out in the school, in the backseat of a car, two young people, high on dope, are removing one after finishing sex. In a bathroom of a public building across the street, a couple who has just met is putting on a condom. In a parking lot of the local high school, in the backseat of a car, two young people, high on dope, are removing one after finishing sex. In a bathroom of a public building across the street, a couple who has just met is putting on a condom. In a parking lot of the local high hotel armed with a bottle of champagne and condoms. In a parking lot of the local high hotel armed with a bottle of champagne and condoms. In a parking lot of the local high hotel armed with a bottle of champagne and condoms. In a parking lot of the local high hotel armed with a bottle of champagne and condoms. In a parking lot of the local high hotel armed with a bottle of champagne and condoms. In a parking lot of the local high hotel armed with a bottle of champagne and condoms. In a parking lot of the local high school, in the backseat of a car, two young people, high on dope, are removing one after finishing sex. Out in the suburbs, a man puts one on before he has sex with his regular partner at his home. In a bathroom of a public transportation system, another man is performing oral sex on his male partner. The chances of HIV being passed from one person to another depend on the type of contact. HIV is most easily spread, or transmitted, through unprotected anal sex, unprotected vaginal sex, and sharing injection drug equipment. Unprotected sex means sex in which no condoms or other barriers are used.

Transmission of HIV through sexual contact has been the most frequent means of the spread of the disease. Because of the link between multiple partners and increased risk of AIDS established in the homosexual population in the US, there is much concern about the role that commercial sex workers may play in the spread of HIV infection.

It is difficult to talk about sex workers as a single ‘group’, because those involved in the sex industry come from a diverse range of backgrounds and cultures, and can differ greatly in the lives that they lead. In the same way, the levels of risk that they face in terms of HIV infection can be vastly different, depending on the country that they live in, whether they work from a brothel or ‘on the street’, and whether they have access to condoms, amongst other factors (UNAIDS, 2009). A wealthy escort supplying services to businessmen in London, for instance, may face a very different level of risk to that of an impoverished girl who is being forced to sell sex in a red-light district in Thailand. In India HIV prevalence ranges from 4.6 percent among sex workers in Mumbai to 24 percent among street-based and 29 percent among brothel-based sex workers in Maharashtra (WHO/UNAIDS/UNICEF, 2011).

Despite this diversity, sex workers often share several common factors in their lives, regardless of their background. Some of these factors can increase the risk that they will be exposed to HIV.

**Multiple partners, inconsistent condom use**

In general, sex workers have relatively high numbers of sexual partners. This in itself does not necessarily increase their likelihood of becoming infected with HIV, if they use condoms consistently and correctly then they will probably be protected no matter how many people they have sex with. The reality, however, are that sex workers and their clients do not always use condoms. Of 86 reporting countries, less than a third reported that 90 percent of sex workers used a condom with their last client, whilst more than half reported condom use by less than 80 percent of sex workers (UNAIDS, 2010), where as in some cases, it has been reported that sex workers have no access to condoms, or are not aware of their importance. In other cases, sex workers are simply powerless to negotiate safer sex, even if they try to do so. Clients may refuse to pay for sex if they have to use a condom, and use intimidation or violence to enforce unprotected sex. They may also offer more money for unprotected sex – a proposal that can be hard to refuse if the sex worker in question is in desperate need of an income.

**Social and economic factors**

As well as having high rates of partner change, sex workers often share other factors in their lives, particularly in regards to their social and economic positions. Sex workers are generally stigmatized, marginalized and criminalized by the societies in which they live, and in various ways, these factors can contribute to their vulnerability to HIV.

For one thing, even though sex work is at least partially legal in many countries, sex workers are rarely protected by the law. (UNAIDS, 2010). Around the world, there is a severe lack of legislation and policies protecting sex workers from the actions of clients that can put them at
Table 1. Socio demographic characteristics of 100 respondents selected as HBSW's from different area of Karachi, Pakistan

<table>
<thead>
<tr>
<th>Occupation Category</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiter</td>
<td>46</td>
<td>46</td>
</tr>
<tr>
<td>Room Service Person</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Receptionist</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>Security personnel</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-20</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>21-30</td>
<td>57</td>
<td>57</td>
</tr>
<tr>
<td>31-40</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>41 or more</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Living arrangements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hotel</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Alone</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>With Family</td>
<td>49</td>
<td>49</td>
</tr>
<tr>
<td>Others</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>Unmarried</td>
<td>52</td>
<td>52</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
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risk. For example, a sex worker who is raped will generally have little hope of bringing charges against their attacker. The lack of protection in such cases leaves sex workers open to abuse, violence and rape, and in such an environment it is easier for HIV transmission to occur (World Health Organisation, 2005). Non-governmental organizations report that almost two thirds of the countries they work in have laws that make it difficult for them to provide services to sex workers. (UNAIDS, 2010). In some countries police use the possession of condoms as evidence that somebody is involved in sex work, further impeding sex workers’ efforts to protect themselves.

MATERIAL AND METHOD

In this study was conducted in the hotels selected from different parts of Karachi. Karachi is the largest city of Pakistan and it is the commercial and industrial capital of the country. It is the cosmopolitan city and all the people from different parts of country come here for the busy as its economy is based on industrial production, trade and finance.

During this study, the history form was filled and we found that people settle in Karachi not only came from four provinces of Pakistan but there were considerable number of Bengalis, Afghans and Burmese also. These people were living here without families and they indulge in sex activities and they were at high risk of contracting diseases like HIV/AIDS.

The duration of this study was for two months i.e. from March 2009 to May 2009 and all the data was collected. Initially the list of hotels was prepared including all kinds of hotels ranging from local to 5 star. In our study we included 50 hotels in three adjoining localities like Cantonment, Sadder and Shahrah-e Faisal. The other 25 hotels were selected randomly in this survey. The survey was completed by preparing a questionnaire and this was filled by these workers. The different categories of staff were included in the surveys which were waiter, room service person, and receptionist security staff.

RESULT

In this study the survey was carried out and the total 100 persons were selected and questionnaire was filled. In this study the demographic data for the subjects was shown in table 1. The majority of hotel workers were 69% were young with age group of 30 years. 52% were unmarried and 21% were staying in hotel. About two third were 63% had migrated to Karachi from other parts of the country.

The most of the person was primarily from NWFP was 27%. In this study the persons were literacy level was 98%, 48% studied beyond matriculation whereas 33% were non-metric. (figure 1). 36% of respondents were Urdu speaking, other major groups included pushtoons (17%) and Punjabis (15%) 95% were Muslims and 5% were Christians as shown in figure 2.

37% had ever visited commercial sex workers. The 15 person visited commercial sex workers reported, they used condoms. During this study 52 people were
unmarried, out of these 30 (58%) persons were involved in sexual activities. Among them 24 persons (80%) never used condoms, the one person (3.3%) only used condom consistently and 5 people (16.4%) used occasionally (table 2). These all were at high risk behavior.

During survey it was also noted that 85% of hotel workers knew about AIDS, there were many misconceptions regarding HIV transmission. 32% reported that HIV is transmitted by mosquito bite whereas 25% were having concept that by shaking hands with infected person can transmit HIV.

A large significant portion of sex workers replied that HIV can be transmitted through sneezing/coughing and these were 45% of the sex workers, whereas 56% had a concept that by kissing.

During the survey 62% were hotel workers who had knowledge of STD, exposure especially to person at high risk of acquiring HIV infections. They were 67% subjects
who had knowledge that ultimate fate of HIV/AIDS is death and 35% of the respondents replied that there is no vaccine and 41% said that there is no cure. At one question 50% respondents had view that HIV infected persons shouldn’t be involved in food preparation.

**DISCUSSION**

The industrialization and urbanization together with tremendous growth in population has prompted people to migrate to urban areas in search of employment. These people are forced by necessity to have their meals at any place affordable to them. This situation has created ever growing demands for hotels. In recent past, hotel trade has grown rapidly and has become a source of employment to a large number of people.

It is difficult to talk about sex workers as a single ‘group’, because those involved in the sex industry come from a diverse range of backgrounds and cultures, and can differ greatly in the lives that they lead. In the same way, the levels of risk that they face in terms of HIV infection can be vastly different, depending on the country that they live in, whether they work from a brothel or ‘on the street’, and whether they have access to condoms, amongst other factors. In India HIV prevalence ranges from 4.6 percent among sex workers in Mumbai to 24 percent among street-based and 29 percent among brothel-based sex workers in Maharashtra. (WHO/UNAIDS/UNICEF, 2011) Despite this diversity, sex workers often share several common factors in their lives, regardless of their background. Some of these factors can increase the risk that they will be exposed to HIV.

A study was conducted in 1988 of male sex workers in three areas of Thailand: Bangkok, Hat Yai, and Chiang Mai (Muangman et al. 1988). In these areas, workers meet clients through gay bars, bath houses, and public locations. Most workers were in their twenties and the mean incomes were low for the urban areas. Most workers had some formal schooling with the lowest levels in Hat Yai. (Muangman et al., 1988; Kathleen et al., 1993). The threat of an HIV epidemic is looming over Bangladesh, as STIs and risk behavior levels have been found to be high (Gibney et al., 1999; Gibney et al., 1999; UNAIDS, 2009; WHO/UNAIDS/UNICEF, 2011). It is well known that epidemics usually begin among people most vulnerable to HIV, such as sex workers and their clients, males having sex with males, and injecting drug users.

In one of the study it has been reported that 18% of the hotel-based sex workers (HBSWs) were below 18 years of age, indicating that there is a demand for young girls in the sex trade, while this age group has an increased vulnerability to HIV and other STIs due to various factors. About one-third of the HBSWs surveyed were unmarried, and among the married HBSWs, approximately half were either divorced or living separately from their husbands.

Living separately was found to be a risk factor for STIs (Bogaerts et al., 2001). The prevalence of STIs among the HBSWs studied was high, which is not surprising since the previously measured condom use level were found to be extremely low. In a behavioral baseline study among HBSWs undertaken by Family Health International in 2001, it was found that over 90% of the sex acts were not protected by a condom. Although condom promotion activities are now ongoing, activities that effectively address condom promotion among clients of sex workers need to be stepped up. Around 36% of the HBSWs were found to be positive for gonorrhea, and 43% were positive for chlamydia. (Nessa et al., 2004).

During our study we came across with knowledge that in the hotel based workers are beyond matric and also had information about HIV/AIDS. 85% of all the responders had heard about AIDS and there were misconceptions.

This is in agreement with a previous study in Bangladesh, where 42% of street-based FSWs were positive for gonorrhea (D’Costa et al., 1985; Gibney et al., 1999). The prevalence of syphilis in our study was 8.5%, which is lower than the 57% prevalence found in a brothel-based study in Bangladesh (Sarker et al., 1998). This might be due to that fact that most HBSWs have been in the business for only a short time (0 to 12 months). The low prevalence of *T. vaginalis* infection among the HBSWs might be due to the fact that *T. vaginalis* infection is often treated in syndromic management due to its associated symptoms (foul-smelling discharge and vulvovaginal itching). There is now considerable evidence that the presence of bacterial vaginosis has a role in acquisition of HIV (Schmid et al., 2000). The prevalence of bacterial vaginosis among the studied population was 57%, which might be due to disturbance of vaginal microflora due to frequent intercourse and subsequent douching. A similar prevalence of bacterial vaginosis has been observed in Senegal (Ndoye et al., 1998).

In poor countries, data on STDs and related complications are limited, which causes a substantial underestimation of the burden of these diseases. STDs are often asymptomatic and are technically difficult and often expensive to diagnose. This is particularly true in regions with limited access to health care facilities for diagnosis and treatment of STDs and where there is social stigma attached to STDs. A total of 43% of the women enrolled in the present study were asymptomatic. The lack of symptoms among women with STDs is a major constraint in using syndromic algorithms for screening for gonococcal and/or chlamydial cervicitis.

The present study showed that currently available syndromic management has had limited success in reducing the STD prevalence among HBSWs in Karachi, Pakistan. This might be true in similar settings in other countries in the region. STD intervention strategies using syndromic management in a population with a large number of asymptomatic infections may result substantial
under treatment. A large majority of people infected with STDs live in the developing world, where laboratory facilities for the etiological diagnosis of STDs and the detection of asymptomatic infections are largely nonexistent. In populations with a high STD prevalence, epidemiological treatment of the target population (also called mass treatment) should also be considered an option; it has maximum sensitivity (100%) and a positive predictive value equal to the prevalence of cervical STDs (Holmes et al., 1996).

**CONCLUSION**

Both HIV infection and STIs among women selling sex were relatively low in our study, which is possibly due to a high condom use, relatively low numbers of sexual partners and availability of clinical services, including syndromic management. However, there exists a high risk for a concentrated HIV epidemic among women selling sex due to their low level of knowledge about HIV, risk behaviour and sexual practices. Health-care services that provide appropriate STD diagnosis and treatment without disapproval also need to be developed for workers in the area. Similarly, services for clients are also lacking. It should be noted that both groups have sufficient income to pay for services, so that once established, the services could become self supporting. In addition, increasing availability of good quality condoms and water-soluble based lubricants for both sex workers and clients should enhance disease prevention. These should be readily available at the sites where sex workers and clients meet, as well as in places of lodging for tourists and other places where sexual encounters take place.

**REFERENCE**


