HIV INFECTION AND RISK BEHAVIOUR OF COMMERCIAL SEX WORKERS AND INTRAVENOUS DRUG USERS IN SLOVAKIA

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SUMMARY

Introduction: Aim of the study was to determine risk behaviour and HIV prevalence among commercial sex workers (CSWs) and intravenous drug users (IDUs) in streets of Bratislava and B. Bystrica, SR.

Methods: HIV antibodies were tested from saliva using ELISA test. Anonymous questionnaire was completed.

Results: 121 persons (61 men and 60 women) were involved in the sociological study. Mean age of the participants was 21.9 years. 185.1% of subjects were from Bratislava. 108 participants were tested for the presence of HIV-antibodies, one was confirmed HIV-positive (0.82%). In the past 47.9% of participants and 22.3% of their partners were tested for the presence of HIV-antibodies. 10.8% of subjects proclaimed that they suffered from other sexually transmitted infection (STI) in the past. HIV testing of participants significantly correlated with the testing for other STI ($p<0.002$) as well as with HBV/HCV ($p<0.001$). 58 participants were using tattooing (47.9%). 46.3% of all participants never used condoms with partners. 31.4% of respondents proclaimed disruption of condom during sexual intercourse. Significant correlation was found between testing of participants for other STI and usage of condoms with their partners ($p<0.013$). Women used condoms more often by sexual contacts with partners than men used condoms ($p<0.094$). They were also significantly more tested for other STI in the past ($p<0.021$) and they suffered from other STI more often than men ($p<0.033$). 26.5% of person - only women - were involved in commercial sex work. 93.5% of them were taking drugs as well, 21.8% suffered for other STI in the past. They were working in sex business on average for 26 months. The average number of their clients per week was 12.3. CSWs used condoms more often with clients than with partners. 98.2% of all participants were taking drugs, 93% of them intravenously. 24.6% of IDUs always used new or their own needles and syringes, while 69.4% shared equipments with the other users. IDUs drug users used condoms significantly less often with their partners than did CSWs ($p<0.006$). CSWs were significantly more often tested for other STI ($p<0.001$) and they also more often suffered for other STI than IDUs ($p<0.045$).

Conclusion: More effort should be done to decrease risk behaviour revealed in the groups of CSWs and drug users.

Key words: HIV, CSWs, IDUs, risk behaviour

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INTRODUCTION

Until now, in Slovakia as well as in former socialist countries, HIV (human immunodeficiency virus) infection among STI (sexually transmitted infections) patients has been extremely low. From 1986 to Dec. 31, 2002 in Slovakia 170 people (109 Slovaks and 61 foreigners) were found HIV-positive. 67 of Slovaks were infected by unprotected homosexual contacts (61.4%), 29 by heterosexual contact (26.6%), only 2 by sharing needles (1.8%). However, rapid changes in sexual norms and behaviours, the growing commercial sex industry, and increased mobility soon may affect the current situation. The economic and socio-political instability currently affecting Eastern Europe have created a "risk situation" for the spread of HIV. Drug addicted women whose economic and social base is urban settings face multiple dangers of assault, arrest and illness present one important source of income in this context. Legal, social and safety risks associated with exchanging sex for money or drugs reduce the likelihood of regular safer sex practices, thereby increasing the risk of HIV infection.

Aim of the study was to determine sexual behaviour and HIV prevalence during harm reduction programmes among commercial sex workers (CSWs) and intravenous drug users (IDUs) in the streets of 2 towns – Bratislava (500, 000 inhabitants) and Banska Bystrica (300, 000 inhabitans) – in Slovakia.

METHODS

The study was performed in the collaboration of NRC HIV/AIDS and NGO (non-govermental organisation) Odysseus, NGO Prima and NGO Heureka. From Nov. 2001 to Jan. 2002 preventive activities were carried out by the form of discussions of street workers in streets in Bratislava and Banska Bystrica from NGO Odysseus with prostitutes concerning the topics related to HIV/AIDS infection, distribution of clean needles, syringes and condoms

and collection of used needles and syringes. After discussions an opportunity of anonymous testing of anti-HIV antibodies from the saliva was offered to participants. Saliva samples were collected using saliva collection device Omni-SAL (Saliva Diagnostic Systems, Singapore, Ltd). HIV antibodies were tested by the test Wellcozyme HIV 1+2 GACELISA (Murex). Anonymous questionnaire regarding sexual practice was completed.

RESULTS

121 persons (61 men and 60 women) were involved in the sociological study. Mean age of the participants was 21.9 years, with a great age span, i.e. 17–46 years. 103 subjects were from Bratislava, capital of Slovakia (85.1%). 108 participants (89.1%) were tested for the presence of HIV-antibodies during the study, one was confirmed HIV-positive (0.82%). At this time she suffered from syphilis, too. In the past 58 (47.9%) of participants and 27 (22.3%) of their partners were tested for the presence of HIV-antibodies. 25 of 67 participants denoting that they had been tested for infection with the hepatitis C virus (HCV) or hepatitis B virus (HBV) in the past were found HBV or HCV positive (37.2%). 31 subjects stated that they had been sometime tested for other STI (37.5%) . 13 participants proclaimed that they had suffered from other STI in the past (10.8%), from them 2 denoted that they had suffered from syphilis, other 2 from gonorrhoea, 2 had been infected by *Pediculus humanus* and the rest by other infections. Questions specifying the mode of participants' testing for other STI and/or HBV and HCV were not a part in the questionnaire. HIV testing of participants significantly correlated with the testing for other STI ($p<0.002$) as well as with HBV/HCV ($p<0.001$). 58 participants were using tattooing (47.9%).

17 of all participants stated to use condoms with partners during each sexual intercourse (14%) while 56 have never used condoms (46.3%). 38 respondents proclaimed disruption of condom during sexual intercourse (31.4%). HIV testing of partners did not correlate with participants´ using of condoms by sexual intercourse but significant correlation was found between testing of participants for other STI and usage of condoms with their partners ($p<0.013$). On the other hand correlation between other STI and/ or hepatitis in the past and the usage of condoms with partners was not found. Infection with HCV, HBV and/or other STI of participants did not correlate with their usage of condoms during sexual contacts either with clients or with partners. Women compared to men used condoms during sexual intercourse with partners more often ($p<0.094$). They were also significantly more tested for other STI in the past ($p<0.021$) and they suffered from other STI more often than men ($p<0.033$).

32 persons in our study – only women – were involved in commercial sex work (26.5%). 30 of them were taking drugs as well (93.5%), 16 were tested for other STI in the past (50%) and 7 suffered from other STI in the past (21.8%). They were working in sex business on average for 26 months (5–60 months). The average number of their clients per week was 12.3 (2–40). Following sexual services were provided by CSWs: mutual masturbation (62.5%), vaginal sex (81.2%), oral sex (96.9%), anal sex (3%), others (0.8%) (Fig. 1). Results of the study also showed that CSWs used condoms more often with clients than with partners: 10 sex workers reported that they never used condoms with regular sex partners (32.2%) and only 5 CSWs stated that they never used condoms with their clients (1.6%). Only 5 CSWs stated always to use condoms with partners (15%) while 20 denoted always to use condoms (62.4%) with clients. In the group of CSWs significant correlation was found between the testing for HIV and testing for other STI ($p< 0.002$).

119 subjects of all participants were taking drugs (98.2 %), 111 of them intravenously (93%). Questions specifying the kind of used drugs were not included in the questionnaire. 16 IDUs used drugs once or less than once daily (14.2%), 68 IDUs two to four times daily (61.2 %) (Fig. 2). 27 IDUs always used new or their own needles and syringes (24.6%) while 77 shared needles and syringes with the other users (69.4%). 89 subjects proclaimed that somebody else shared with them their equipment for taking drugs (80%). HIV testing of users in the past did not correlate with using own needles and syringes. During sexual intercourse 33 of all drug users used condoms with their partners at random (27.9%) while 57 never (47.7%).

Comparing the group of CSWs with the group of drug users, CSWs used condoms significantly more often with their partners than did drug users ($p<0.006$). CSWs were significantly more

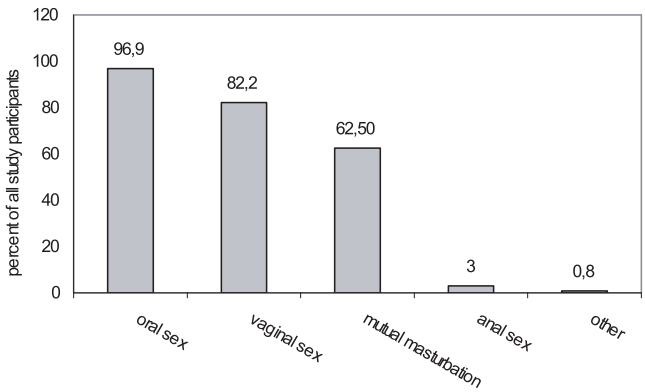

***Fig. 1**. Sexual practices provided by CSWs /No. 32/.*

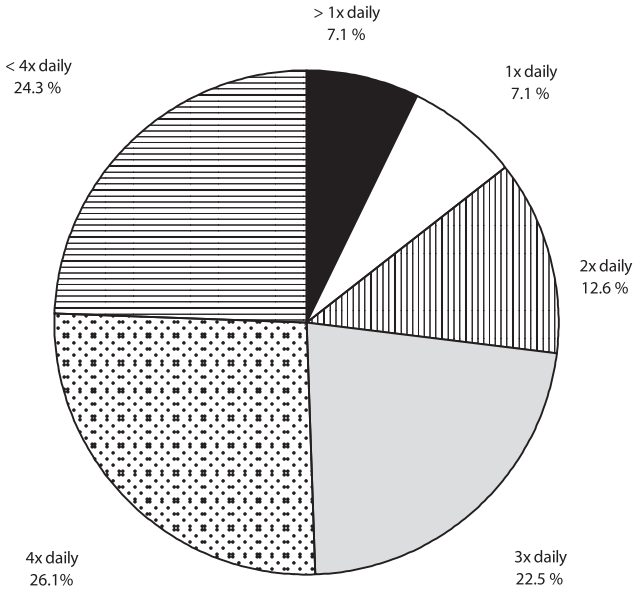

***Fig. 2**. Frequency of intravenous drug use /No. 111/.*

often tested for other STI ($p < 0.001$) as well and they also more often suffered for other STI ($p < 0.045$). No significant differences were found between answers on following issues: tattooing, testing for HIV and/or hepatitis, positive results of testing for hepatitis and/or other STI and use of drugs.

DISCUSSION

Various studies were accomplished in attempt to describe the sexual activities, condom use, HIV prevalence and reported STIs in commercial sex workers and its linkage to injection drug use. During our study low prevalence of HIV-infection was found. Our results correspond to 0.07% HIV prevalence obtained in the study provided among prostitutes in the Czech republic (1). In a similar study performed in Rome the HIV-prevalence among women and transsexuals working in sex business in streets was 6% and 20%, respectively, although most of CSWs reported always using condoms with clients (2). Another study provided in Italy among female sex workers showed a significant increase of HIV seroprevalence among professional sex workers, whereas the high seroprevalence among sex workers who used intravenous drugs was constant (3).

Co-infection with HIV and HCV or HBV is a growing public health concern, because the diseases are spread in similar ways, notably through shared use of needles to inject drugs and sexual activity. In our study more than one third of persons were found hepatitis B or C positive in the past. Other study showed that long-term injectors and reincarceration were the foremost risk factors for HIV/HCV co-infections, showing a trend between the degree of association and the number of viruses infecting a patient (4). In Japan, the prevalence of HCV antibodies was found significantly increased in CSWs comparing to the controls (5). In our study HIV testing of participants significantly correlated with the testing for other STI as well as with HBV/HCV. These facts indicate positive impact of preventive activities provided in the streets of Bratislava and Banská Bystrica.

Almost one half of our respondents never used condoms with partners. These results revealed risk behaviour of our respondents despite of ongoing harm reduction programmes. The fact that about one third of our respondents proclaimed disruption of condom during sexual intercourse also revealed that the level of vulnerability to HIV and other STI could be influenced also by quality of condoms and their appropriate use. Results of our study also indicated that preventive activities – condom usage by respondents with partners and testing for other STI – were strongly linked together and influence each other.

In our study only women were involved in commercial sex business. Almost 1/4 of them were working in sex business on average for more than 2 years. This fact could explain results of our study that women were significantly more tested for other STI in the past, confirmed STI positive and more often used condoms with partners compared to men. Many studies revealed vulnerability of CSWs to HIV and other STI. In our study almost 1/8 of all participants and more than 1/5 of CSWs declared that they had suffered from other STI in the past. Similarly in the countries of previous Soviet Union the huge economic and socio-political crises currently affecting the region have created a "risk situation" for the spread of HIV. The potential overlap with the still uncontrolled syphilis epidemic is probably a key factor in the future of HIV spread in the region (6). In the study provided among low-socio-economic prostitutes in Vilnius syphilis was diagnosed in 13%, another 16% had a serological scar of such an infection while HIV infections were not diagnosed (7).

Use of condoms by CSWs during sexual contact with clients differs in various studies. In our study CSWs used condoms more often with clients than with partners. Results of other study also showed that sex workers might be at higher risk for HIV infection through non-commercial sex (8). In the study in Glasgow one third of men who contacted prostitutes working on the streets had not used a condom during their last contact and oral sex was described to be the most often sexual practice of CSWs similarly like in our study (9).

It is well known that injection drug use is inextricably linked to commercial sex work and STI (10). In our study most of participants proclaimed to use drugs, changed needles and syringes with others or lend somebody their used equipment. On the contrary in the study provided among prostitutes in Vilnius City, Lithuania, only one fourth of persons were found intravenous drug users (11). Results of our study did not confirm observations made among IDUs interviewed in Paris that serology testing and not using clean equipment was independently and specifically associated (12). The study performed in St. Petersbourg among IDUs revealed that 41% of participants shared needles, most had multiple sexual partners and 70% reported engaging in vaginal intercourse without condoms (13). Similar study carried out in the same town in the group of young HIV-positive people mostly dependent on drugs revealed that most of them remained sexually active since learning their HIV-positive serostatus, half engaged in unprotected sex with HIV-positive partners and condoms were not used in one third of the time with discordant partners (14). In our study the fact that drug users used condoms significantly less often with their partners than did CSWs indicated that resources to treat and prevent further infections including HIV should be prioritised toward risk reduction mainly in IDUs.

In our study most of CSWs were using drugs as well. Therefore it was not easy and unequivocal to find differences in risk behaviour between these two groups. CSWs protected themselves by using condoms with their partners significantly more often as well as they were significantly more often tested for other STI than IDUs. These facts indicate that preventive activities accepted in sex business could positively influence the mode of HIV/STI prevention in CSWs´ personal life. On the other hand the fact that CSWs suffered from other STI more often than did IDUs refer to high vulnerability of CSWs to STI. Also the data from urban Houston communities confirmed that the exchange of sex for drugs or money facilitates the spread of STIs in high-risk communities (15).

CONCLUSION

Reducing the transmission of STIs and HIV in drug using communities as well and/or among commercial sex workers is a public health priority. Our study revealed high-risk behaviour of CSWs and IDUs in the streets of 2 towns in the Slovak Republic, although HIV infection was found rare in these groups. However, the high rates of unprotected sex, number of sexual partners and/or clients,

injecting drug use, and STIs provide the basis for an epidemic in these highly vulnerable groups. Alternative female-initiated barrier methods, such as the female condom, are needed among women exchanging street sex to enhance their ability to protect themselves from HIV and STI infection.

We conclude that intervention efforts, including STI health education and screening of CSWs and IDUs should be intensified in SR. Concerns are raised about the appropriateness and the scope of government and non-governmental approaches to the exploding HIV and STI epidemics.

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