

# *Knowledge of sexually transmitted diseases and condom use among female street sex workers in Padua*

C. Veller Fornasa, F. Gai, M. Tarantello and P. Gallina

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## ABSTRACT

**Objectives:** The aim of the present study was to investigate knowledge of sexually transmitted diseases (STDs) and condom use in a population of young female street sex workers from eastern Europe and other non-EU countries based in the Padua area (north-eastern Italy). To assess whether any aspects of their behavior might foster the spread of STDs.

**Study design:** Street sex workers (prostitutes) were approached on the streets or during non-STD medical appointments, their knowledge of STDs and condom use were evaluated. They were asked to answer an anonymous questionnaire comprising 16 questions.

**Results:** 98 of them cooperated. Over one third of the sample frequently did not use a condom. This finding was inversely correlated with their age and educational level. Almost all the street sex workers were aware of AIDS but far less of other STDs. Most were almost totally unacquainted with some of them. We found a statistically significant correlation between condom use and their age, and between condom use and educational level.

**Conclusions:** Sex workers often engaged in unprotected intercourse with clients, they practiced their profession even in the presence of STD-related symptoms and did not use a condom during intercourse with non-paying partners or pimps. The irresponsible behavior of some Italian paying partners prepared to pay extra for unprotected sex, increases the risk of acquiring STDs. The intercourse with female street sex workers can be considered a risk behavior for contracting STDs.

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## K E Y W O R D S

condom use,  
sex workers,  
STD,  
Padua area

## *Introduction*

Sexually transmitted diseases (STD) are known to have a major socioeconomic and biologic impact, particularly on women (sterility, ectopic pregnancies, neoplasms etc. for example) and on the fetus (intrauterine and perinatal mortality, infection, malformations).

In addition an intercourse with sex workers is pro-

moting infections with STDs including HIV.

Previous studies have demonstrated that sex workers do not use appropriately health services and are a high risk category. Street prostitution in its various forms (both male and female sex workers) still represents an important source of infection for STDs, despite the

Figure 1. Questionnaire (16 items) used in the study.

1. Age	10. Do you know that there are sexually transmitted diseases?	14. If yes, which? ( you may give more than one answer):
2. Nationality	<input type="checkbox"/> Yes	<input type="checkbox"/> AIDS
3. Education in years	<input type="checkbox"/> No	<input type="checkbox"/> Syphilis
4. Start of profession:	11. Which sexually transmitted diseases do you know about?	<input type="checkbox"/> Gonorrhoea
<input type="checkbox"/> Under 15 years	<input type="checkbox"/> AIDS	<input type="checkbox"/> Non gonococcal urethritis/vaginitis
<input type="checkbox"/> Between 15 and 18	<input type="checkbox"/> Syphilis	<input type="checkbox"/> Genital herpes
<input type="checkbox"/> Over 18	<input type="checkbox"/> Gonorrhoea	<input type="checkbox"/> Condylomas (genital warts)
5. Your profession is:	<input type="checkbox"/> Non gonococcal (chlamydial) urethritis/vaginitis	<input type="checkbox"/> Scabies
<input type="checkbox"/> Chosen	<input type="checkbox"/> Genital herpes	<input type="checkbox"/> Viral hepatitis
<input type="checkbox"/> Enforced	<input type="checkbox"/> Condylomas (genital warts) – HPV infections	15. Have you suffered from:
6. Your partners are mainly:	<input type="checkbox"/> Scabies	<input type="checkbox"/> Genital itching
<input type="checkbox"/> Italians	<input type="checkbox"/> Viral hepatitis	<input type="checkbox"/> Burning sensation in the genital area
<input type="checkbox"/> Non Italians	12. How do you prevent sexually transmitted diseases (you may give more than one answer):	<input type="checkbox"/> Yellow-green genital discharge
7. How often do you use a condom?	<input type="checkbox"/> By taking the contraceptive pill	<input type="checkbox"/> Off-white genital discharge
<input type="checkbox"/> Always	<input type="checkbox"/> By informing your partner	<input type="checkbox"/> Genital ulcers
<input type="checkbox"/> Often	<input type="checkbox"/> By using a condom	<input type="checkbox"/> Itching over your whole body
<input type="checkbox"/> Sometimes	<input type="checkbox"/> By reducing the number of partners	16. When this happened did you stop having sexual intercourse:
<input type="checkbox"/> Never	13. Have you ever had a sexually transmitted disease?	<input type="checkbox"/> Yes
8. Does your partner ever ask you not to use a condom?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Never	<input type="checkbox"/> No	
<input type="checkbox"/> Sometimes		
<input type="checkbox"/> Often		
9. Do you use a condom with non-paying partners you know well?		
<input type="checkbox"/> Seldom		
<input type="checkbox"/> Often		
<input type="checkbox"/> Always		

launch of worldwide information campaigns since the advent of the AIDS epidemic. (1,2,3,4) Despite this evidence, data about prostitution and sexually transmitted diseases in Italy are limited (5,6) A cross-sectional survey carried out in 1997-1998 in Rome, has shown that street sex workers in Italy are now almost entirely immigrants, many of them illegal. The country of origin of this population as well as their cultural and social background, often evades the public health authorities (6) and is often only partially or not at all known. We felt that investigating sexual awareness and behavior in a sample of street sex workers in North-Italy would be another important step in STD prevention, by identifying their potentially critical behaviors.

## Materials and methods

Our survey was conducted from January 2001 to January 2004 by means of a questionnaire compiled with suggestions of female street sex workers practicing their profession in the area of Padua (North-East Italy). The participating sex workers were approached

either on the street by a group of volunteers (members of medical or religious associations), during non-STD clinical check-ups or rarely at public outpatient health-care facilities. We approached a cohort of 135 street sex workers; consecutively 98 subjects gave the consent to participate to the survey. They received an anonymous questionnaire, which was drawn up in the respective mother tongue. The participation rate was > 70 %.

The questionnaire was composed of 16 items: four were multiple choice and the others envisaged one answer (Figure 1). We analyzed the relationship between condom use and other variables, as age, educational level and nationality. Data analysis was performed using chi-square test.

## Results

The respondents were aged between 17 and 27 years: 33 of them were aged between 17-20 years, 40 between 21-23 years and 25 between 24-27 years.

Table 1. Educational level of sex workers evaluated in the study.

Schooling in years	Africa	Eastern Europe	Caribbean	Total
Up to 5	4 (10,5 %)	1 (2,0 %)	2 (20,0 %)	7 (7,1 %)
6-8	16 (42,1 %)	16 (32,0 %)	3 (30,0 %)	35 (35,7 %)
9-13	14 (36,8 %)	25 (50,0 %)	4 (40,0 %)	43 (43,9 %)
Over 13	4 (10,5 %)	8 (16,0 %)	1 (10,0 %)	13 (13,3 %)
Total	38 (100%)	50 (100%)	10 (100%)	98 (100%)

50 girls came from Eastern Europe (Albania, Romania, ex-Yugoslavian states, Russia), 38 from Africa (Nigeria, Ghana) and 10 from the Caribbean.

Educational level, expressed as the number of years spent at school as well as their country of origin are given in details in Table 1.

Of the respondents 35 reported to have started the profession between the age of 15 and 18 years, while 36 after the age of 18 years, and none before 15 years. No reply was obtained from 28 subjects

49 persons admitted that the sex work had been a free choice, 20 said having been forced to enter such activities and 29 did not answer the question. The majority of paying partners were Italians (93%).

60 respondents reported using a condom at all times. The younger girls used a condom less frequently than the older ones, i.e. 45,5% of the 17-20 year-group against 69,2 % of older girls (Chi-square= 5,212). A significant correlation was also found between the educational level and the frequency of condom use, those

with over 13 schooling years used condoms more frequently (Chi-square 4,619). Figures 1 and 2.

35% of sex workers reported that their partners sometimes or often asked them not use a condom. Most sex workers (85%) did not use a condom with non-paying partners (boyfriends, fiancés, pimps). Almost all the sex workers (98%) were aware of the existence of sexually transmitted diseases. As for specific knowledge of the various STDs, AIDS was known to 93% of the sex workers, syphilis to 56%, gonorrhoea to 23%, genital herpes to 29%, scabies to 24%, viral hepatitis B to 16%, non gonococcal urethritis/vaginitis (chlamydial infections) to 8%, and condylomas (HPV infections) to 6% of the responding persons. Other authors<sup>3</sup> have also indicated poor knowledge of the latter two pathologies. The girls in the 24-27 age groups were more aware of STDs.

12% of respondents were convinced that STDs could be prevented by taking the contraceptive pills.

87% of the respondents reported that they had never contracted an STD, but all admitted that they had had experienced at least one symptom compatible with a STD, while only 56% had suspended sexual intercourse on that occasion.

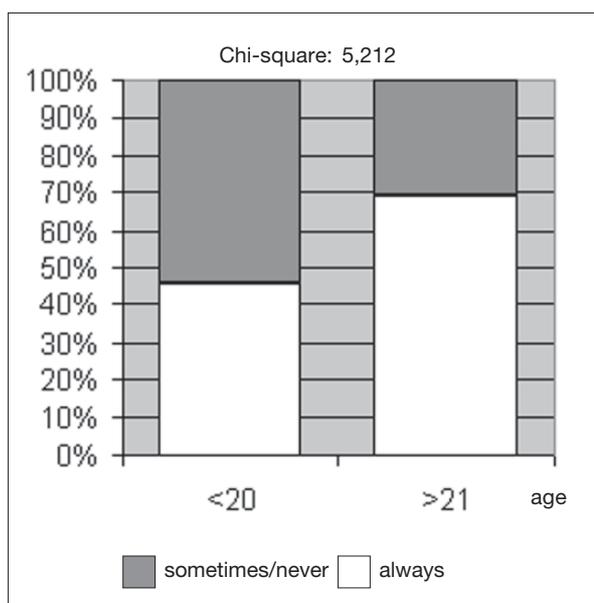


Figure 2. Use of condom by age group.

## Discussion

The number of years needed to collect the sample is revealing the difficulties encountered in recruiting participants willing to cooperate: 135 females agreed to a preliminary dialogue, but only 98 answered the questionnaire, while the remainders declined complete cooperation.

None of the participating sex workers admitted to have started the profession before age 15 years. We think, however, that it may be very difficult to evaluate this. Anyway 20% of the respondents admitted that they had been forced to become prostitutes. The same may have happened to the remaining 30% who did not answer the question, increasing to 50% the number of women interviewed who had been psychologically or physically forced to prostitute themselves.

37% of our sample reported that they did not fre-

quently use a condom; this finding was inversely correlated with age and educational level, denoting a natural propensity of younger workers to satisfy clients (Italians, who often request unprotected intercourse), or the desire to be more popular, or the fear of losing clients. Also in a study by Wong and colleagues on a population of Hong Kong sex workers, condoms were more frequently used by workers aged over 30. (1)

Most sex workers (85%) did not use a condom with non-paying partners (boyfriends, fiancés, pimps), this data are thereby corroborating other studies (1,2,3). Failure to use a condom with non-paying partners indicates an "escape route" for the spread of STDs, considering that sex workers' boyfriends are not monogamists.

Due to worldwide information campaigns, almost all the sex workers were aware of AIDS but, despite their relatively satisfactory educational level, knew very little of other STDs and were almost totally ignorant of further STDs like viral hepatitis, urethritis, nongonococcal vaginitis, chlamydial infections or HPV infections (condylomas).

Interestingly, these data differ only marginally from the findings of other surveys conducted by us among young Italians (conscripted soldiers, senior high school students). It is surprising that this information is lacking

among those who engage in sex as a profession. (7,8) This lack of awareness is further corroborated by the fact that 12% of the respondents believed that the contraceptive pill protects not only against the risk of pregnancy but also against sexually transmitted infections. This was also reported to be the case in studies carried out in Italy. (7,8)

The fact that over half of the sample reported not to have interrupted sexual activities in the presence of genital symptoms compatible with STD may be a logical consequence of faulty knowledge. By stopping their activities the women may incur a serious risk of retaliation by their pimps or a loss of earnings, thus they continue to engage in sexual practices despite the symptoms.

Our survey reveals at least three possible critical points which render intercourse with street sex workers a risk behavior for contracting STDs: a) ignorance on the part of sex workers who often engage in unprotected sex with clients and who can continue to practice their profession despite the presence of STD-related symptoms; b) failure to use a condom during intercourse between sex workers and their non-paying partners or pimps; c) the ignorance and irresponsibility of Italian paying clients who are often willing to pay more for services without the use of a condom.

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## AUTHORS' ADDRESSES

*Cleto Veller Fornasa MD, Professor of Dermatology, Unit of Immunodermatology Local Health Center n° 16, University of Padova, Padova, Italy; e-mail: cleto.vellerfornasa@ulss16.padova.it*  
*Fabiana Gai MD, same address, e-mail: fabianagai@virgilio.it*  
*Marco Tarantello MD, same address.*  
*Pietro Gallina MD, same address, e-mail: pietero.gallina@unipd.it*