

The characteristics of sexual behavior and extent of condom usage among sexually active Croatians from Eastern Croatia

Doğu Hırvatistandaki cinsel aktif kadınların kondom kullanımını hakkındaki görüşleri ve cinsel davranış biçimleri

Maja Miskulin¹, Ivan Miskulin², Dinko Puntaric¹, Aida Mujkic³, Josip Milas⁴, Natasa Bosnjak⁴

¹*School of Medicine University of Josip Juraj Strossmayer, Osijek, Croatia*

²*Faculty of Electrical Engineering University of Josip Juraj Strossmayer, Osijek, Croatia*

³*Andrija Stampar School of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia*

⁴*Institute of Public Health for the Osijek-Baranya County, Osijek, Croatia*

Abstract

Objective: To determine the extent of condom usage as a method of protection from sexually transmitted infections (STIs) among sexually active individuals obliged to present for periodical health examination at the Institute of Public Health for the Osijek-Baranya County, in Osijek, eastern Croatia.

Material and Methods: During February 2004, a cross-sectional questionnaire survey was conducted. The research tool was an unidentified 20-item questionnaire addressing the sexual behavior of study subjects and their partners and methods of protection from STIs. Descriptive statistics and χ^2 - test were used for data analysis.

Results: The response rate was 84.2% (278/330). A total of 278 subjects, 96 (34.5%) males and 182 (65.5%) females, 167 (60.1%) married and 111 (39.9%) single, mean age 31.3 ± 8.4 , age range 18-52 years were enrolled in the study. Study results revealed 22.3% (62/278) subjects to have had two or more sexual partners over the one-year period and the use of condom was reported by 40.3% (25/62) of those subjects.

Conclusions: The obtained results point to the need for additional education on protection from sexually transmitted infections and on risky sexual behavior, with special reference to the role of condom usage in the prevention of these diseases and their detrimental effects on the reproductive health of sexually active individuals.

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Key words: Sexual behavior, sexually transmitted infection, condom, Osijek, Croatia

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Özet

Amaç: Doğu Hırvatistan bölgesindeki Osijek-Baranya ilçesi Halk Sağlığı Enstitüsüne başvuran cinsel aktif kadınların cinsel temasla bulaşan hastalıkların (CTBH) önlenmesinde kondom kullanım durumlarını saptamak,

Gereç ve Yöntemler: Şubat 2004 de kesitsel bir çalışma yürütüldü. 20 soruluk bir anket hazırlandı. Veri analizi için ki kare ve betimleyici analizler uygulandı.

Bulgular: Yanıt oranı %84.2 (278/330) idi. Evli 167 (%60.1) ve bekar 111 (%39.9) yaşları 31.3 ± 8.4 , dağılımı 18-52 olan kadınlar çalışmaya dahil edildi. Çalışma, %22.3 kadının son bir yıl içinde bir veya daha fazla cinsel partnerinin olduğunu ortaya çıkardı. Kondom kullanımını %40.3 (25/62) idi.

Sonuç: CTBH kontrolünde eğitim gereklidir ve kondom kullanımının bu hastalıkların önlenmesindeki önemi öğretilmelidir.

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Anahtar kelimeler: Cinsel davranış, cinsel temasla bulaşan hastalıklar, kondom, Osijek, Hırvatistan

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Introduction

Sexually transmitted infections (STIs) still pose a considerable health problem in both industrialized and developing countries. According to World Health Organization data, about 340 million people are infected with an STI, AIDS excluded, in the world *per year* (1). The epidemiological pattern of STIs differs considerably in different parts of the world. During the 1990s,

the north and west European countries witnessed a dramatic decrease in the incidence of STIs, especially of gonorrhea and syphilis. This trend is believed to most likely result from a combination of factors, primarily early school education on sexuality, behavioral modifications to reduce sexually risky behaviors, promoting condom usage, and accessibility of appropriate STI treatments (2, 3). In developing countries, both the prevalence and incidence of STIs is still quite high, thus these diseases present a considerable public health

problem (2). In the last few decades, the pattern of STI-s has been reported to change with a lower incidence of the "classic" STI-s and increasing rates of Chlamydia, genital herpes, human papilloma virus and, of course, HIV (4-7). This trend was noted in Croatia in the early 90-s when significant increase of HPV infection among men and women in Croatia was discovered (8). Other studies conducted in Croatia have dealt mainly with the problem of STI among vulnerable population subgroups, such as urban adolescent sexually active females, high school students, Croatian young people in general, Croatian migrant workers such as seafarers, construction workers and truck drivers and finally, clients tested for HIV infection at the Voluntary Counseling and Testing Center (VCT) (9-16).

Considering the findings of all the above mentioned studies, it is obvious that in the Croatian context one of the most important factors contributing to the spread of STIs is low and irregular condom use with casual partners combined with a low level of knowledge about sexuality and prevention of STIs (9-16). The fact that there has been no study about the extent of condom usage as a method of protection from STIs among sexually active individuals from the general population in Croatia (17) and the fact that, in the eastern part of Croatia, there has been only one study dealing with various risk behaviors in high school students from Osijek-Baranya County (including risky sexual behavior), which confirmed a strong influence of parental health-risk behaviors on their children's health-risk behaviors (18), motivated us to embark on the present study. The aims of our study were to investigate the characteristics of sexual behavior and condom usage as a method of protection from STIs in a group of sexually active individuals obliged to present for periodical examinations at the Outpatient Clinic of the Institute of Public Health for the Osijek-Baranya County in the capital of eastern Croatia, Osijek. The frequency of condom usage was especially assessed in individuals having two or more partners during the one-year study period

Material and Methods

All individuals presenting for obligatory periodical health examinations at the Institute of Public Health for the Osijek-Baranya County in Osijek according to the By-law on population protection from infectious diseases (19), during February 2004 were invited to participate in a questionnaire study. These individuals (mainly workers from food industries, restaurants, schools, cosmetic salons as well as health professionals working in various health institutions) were obliged to undergo periodical health examinations at the Epidemiological Department of the Institute of Public Health for the Osijek-Baranya County in Osijek according to the By-law on population protection from infectious diseases. Each year, around 3 300 clients (60% females and 40% males) are examined at the Epidemiological Department. Upon examination during February 2004, the potential study subjects received a cover letter telling them about the study and a responsible epidemiologist explained them in detail the aim of the study and asked them to participate in it on a voluntary basis, by filling-out an unidentified questionnaire. The Ethical Committee of the Institute of Public Health approved the study

and each participant filled out an informed consent before he/she filled-out an unidentified questionnaire. All together, 330 potential study subjects were asked to participate in the study, and 52 (15.8%) of them refused. Among non-respondents there were 30 males (57.7%) and 22 females (42.3%). A total of 278 men and women participated in the study and the overall response rate was 84.2% (278/330).

The study was performed using an unidentified questionnaire containing 20 questions: 5 questions on demographics (age, sex, marital status, age at first intercourse, sexual orientation); 9 questions on sexual behavior of the study subjects and their partners (number of sexual partners during last year, history of any diagnosed STIs in study subject or his/her sexual partner/s, type of sexual intercourse, gender of sexual partners, risky sexual activities such as unprotected sexual intercourse with casual partner and sexual activities combined with drug or alcohol abuse without proper protection, sexual activities with partners of risky sexual behavior meaning promiscuous partners or sex workers); and 6 questions on methods of protection from STIs (primarily use of condoms during each type of sexual intercourse with casual partners, hepatitis B vaccination, testing for HIV). The questionnaire was constructed in collaboration between the Department of Public Health School of Medicine University of J. J. Strossmayer in Osijek, Department of Computer Science, Faculty of Electrical Engineering University of Josip Juraj Strossmayer in Osijek, Institute of Public Health for the Osijek-Baranya County in Osijek and Andrija Stampar School of Public Health in Zagreb, and several pilot studies were performed before the final version. It took about 15 minutes to fill out the entire questionnaire and then subjects were instructed to put these filled out forms in a specially designed box that was positioned in the waiting room area and could not be opened or seen through.

Comparison of particular answer frequencies was made by the χ^2 -test. The level of statistical significance of difference was set at $p < 0.05$. Statistical analysis was done by using Microsoft Excel 2000 (Microsoft Corporation, Redmond, WA, USA).

Results

Results are presented in Figures 1-3. A total of 278 participants, 96 (34.5%) males and 182 (65.5%) females, mean age 31.31 ± 8.42 (range 18-52) years, all declaring themselves as being sexually active (in the sense that they had at least one sexual intercourse during past year), consented to take part in the study. Out of 278 study subjects, 78 (28.1%) were in 18-24, 95 (34.2%) in 25-34, 89 (32.0%) in 35-44 and 16 (5.7%) in 45-52 age groups and 167 (60.1%) were married while 111 (39.9%) were single. Of 96 men, 52 (54.2%) were married and 44 (45.8%) were single. Of 182 women, 115 (63.2%) were married and 67 (36.8%) were single (Figure 1).

The mean age at starting sexual activity was 17.72 ± 1.94 (range 13-27) years. According to sexual orientation, there were 4 (1.4%) subjects of homosexual (1 male and 3 females) and 274 (98.6%) subjects of heterosexual orientation.

Analysis of questionnaire answers revealed that 62 (22.3%) study subjects had had two or more sexual partners during the

one-year study period. According to marital status, two or more sexual partners during the study period were reported by 43 (38.7%) of single and 19 (11.4%) of married subjects. According to sex, 38 (39.6%) male and 24 (13.2%) female subjects had two or more sexual partners during the one-year period, the difference being statistically significant ($p=0.0000$, $\chi^2=24.366$). Analysis of questionnaire answers revealed 25 (22.5%) single men and 18 (16.2%) single women to have had two or more partners during the study period, the difference being statistically significant ($p=0.0015$, $\chi^2=10.040$). In the group of married subjects, 13 (7.8%) men and 6 (3.6%) women reported two or more partners during the study period, also yielding a statistically significant difference ($p=0.0002$, $\chi^2=13.899$). According to sex and marital status, two or more sexual partners during the one-year period were reported by 25 (56.8%) single men, 13 (25.0%) married men, 18 (26.9%) single women and 6 (5.2%) married women (Figure 2).

The use of the condom as a measure of protection against STIs was reported by 25 out of 62 (40.3%) subjects with two or more sexual partners during the one-year study period, i.e. 15/38 (39.5%) men and 10/24 (41.7%) women. The sex difference was not statistically significant ($p=0.8639$, $\chi^2=0.029$) (Figure 3). Further analysis of the group of subjects with two or more partners who reported use of the condom as a measure of protection revealed it to be most frequently used by single subjects aged 18-24 of both sexes (14/25; 56%).

Discussion

The present study is a first attempt to describe the characteristics of sexual behavior and to determine the extent of condom usage as a method of protection from sexually transmitted infections (STIs) among sexually active individuals from the Croatian general population. Numbers and types of sexual partnerships, especially concurrent partnerships, defined as a sexual partnership in which one or more of the partnership members have other sexual partners while continuing sexual activity with the original partner, remain the dominant individual and population risk factors for STI acquisition (20, 21). In that sense it was valuable to discover that 62 (22.3%) of all study subjects in the present study have had more than one sexual partner during the one-year period. Among all single subjects (111) there were 43 (38.7%) with more than one sexual partner during the one-year period and among married ones (167) there were 19 (11.4%) of them. According to sex, 62 study subjects, 38 men and 24 women, yielding a statistically significant sex difference and indicating male subjects from the Osijek area to be significantly more frequently involved in promiscuous sexual relations than female subjects, reported sexual relations with two or more partners during the one-year period. In these findings probably also lies part of the explanation why so few males answered the questionnaire because it is well known that subjects involved in risky behavior are much less motivated to disclose their sexual habits and consequently to even participate in such a survey (22, 23). The other part of the explanation lies in the fact that around 60% of all subjects obliged to undergo the periodical health examination at the

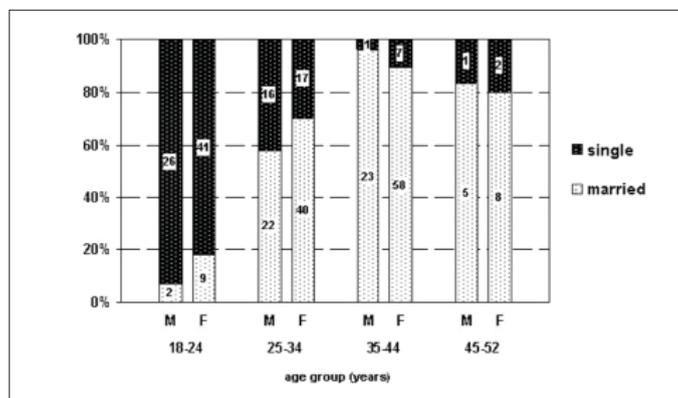


Figure 1. Study subjects (obliged to present for periodical examinations at the Institute of Public Health for the Osijek-Baranya County) according to age group, sex and marital status

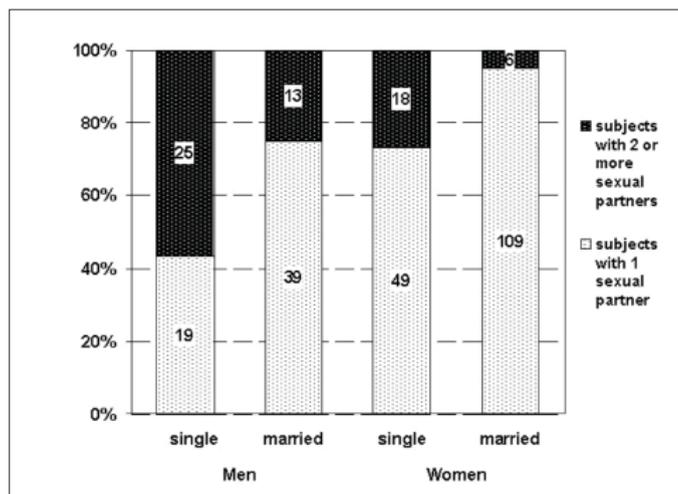


Figure 2. Study subjects (obliged to present for periodical examinations at the Institute of Public Health for the Osijek-Baranya County) according to sex, marital status and number of sexual partners during 2003

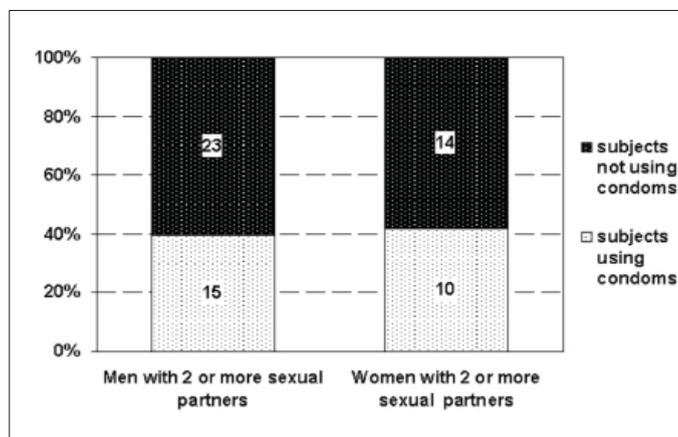


Figure 3. Study subjects (obliged to present for periodical examinations at the Institute of Public Health for the Osijek-Baranya County) with 2 or more sexual partners during 2003 according to sex and use of condom

APPENDIX

QUESTIONNAIRE

Please write or circle Your answer!

1. Birth year: _____ 2. Gender: Male Female 3. Age at first intercourse: _____
4. Marital status: a) married b) single (never married) c) divorced or widowed
5. Sexual orientation: a) heterosexual b) homosexual c) bisexual
6. Number of sexual partners during last year: a) 0 b) 1 c) 2 or more
7. Have you ever been diagnosed with any type of sexually transmitted disease?
a) yes b) no
If yes, please write what type _____
8. To your knowledge, has your current sexual partner ever been diagnosed with any type of sexually transmitted disease? a) yes b) no
If yes, please write what type _____
9. Type of sexual intercourse that you practice:
a) solely vaginal type of sexual intercourse
b) mostly vaginal and beside them sometimes anal and/or oral type of sexual intercourse
c) solely anal type of sexual intercourse
d) solely oral type of sexual intercourse
10. Gender of your sexual partners: a) male b) female c) male and female
11. During sexual intercourse with casual partners in lifetime I have ALWAYS used condoms: a) yes b) no
12. I have NEVER in my lifetime involved myself in sexual activities combined with drug or alcohol abuse without condom: a) yes b) no
13. Have you EVER in lifetime involved yourself in sexual intercourse with promiscuous partners or sex workers? a) yes b) no
14. To your knowledge, has your current sexual partner EVER in lifetime involved himself/herself in sexual intercourse with promiscuous partners or sex workers?
a) yes b) no
15. How often during VAGINAL sexual intercourse do you use condoms?
a) always b) mostly c) sometimes d) never e) I don't practice them at all
16. How often during ANAL sexual intercourse do you use condoms?
a) always b) mostly c) sometimes d) never e) I don't practice them at all
17. How often during ORAL sexual intercourse do you use condoms?
a) always b) mostly c) sometimes d) never e) I don't practice them at all
18. To your knowledge, how often does your current sexual partner use condoms during various types of sexual intercourses?
a) always b) mostly c) sometimes d) never
19. Have you EVER in lifetime received hepatitis B virus (HBV) vaccination?
a) no b) I don't know c) yes (three doses) d) yes (less than three doses)
20. Have you EVER in lifetime been tested for HIV? a) yes b) no

Thank You very much for Your cooperation!

Epidemiological Department of the Institute of Public Health for the Osijek-Baranya County in Osijek, according to the By-law on population protection from infectious diseases, are females because they represent the vast majority of employees in food industries, restaurants, schools, cosmetic salons as well as in the Croatian health sector. Furthermore, questionnaire answers indicated that 25 (40.3%) subjects with two or more sexual partners during the study period used condoms as a measure of protection against STIs with non-detectable sex difference among these subjects. This result is consistent with the results reported from studies conducted in other parts of the world, ranging from 31% to 58% of subjects confirming the use of the condom (24-27). In our study, 81 (29.1%) of all subjects reported sexual relations without the use of appropriate protection, 34 (42.0%) of them were married and 47 (58.0%) single. The difference in practicing risky sexual relations according to marital status was statistically significant, suggesting that this type of risky sexual behavior was characteristic of unmarried subjects, which is also consistent with other study reports (28-30). Furthermore, among 24 (8.6%) study subjects reporting sexual contacts with partners of risky sexual behavior, 15 (62.5%) of them were single. As expected, unmarried subjects were found to be at an increased risk of STIs considering sexual relations without appropriate protection and with partners characterized by risky sexual behavior as risk factors for STIs. According to age, the use of condoms in the group of subjects with two or more sexual partners during the one-year study period showed the highest rate in the subgroup of unmarried subjects aged 18-24, whereas 14 (56%) of them had reported the use of condoms. This age group (including single and married subjects) also accounted for 26 (41.9%) of those having sexual relations with two or more partners during the one-year period. These data are consistent with the results reported from other studies conducted elsewhere and among Croatian youth, which show the rate of condom usage to be higher among younger individuals who generally have a greater number of sexual partners (11,12, 31-35). In this way, by frequent use of condoms as a method of protection, young persons tend to neutralize the effect and prevent the occurrence of detrimental consequences (primarily HIV infection) of their more liberal attitude towards promiscuous relations (36-38). The sample included in the present study could not be considered representative for the sexually active population of the Osijek area, because it was a convenience sample comprising only individuals presenting during February 2004 for obligatory examination at the Institute of Public Health for the Osijek-Baranya County. However, the results obtained in this study gave some valuable information about sexual behavior in the Croatian general population. The significance of these findings is even larger knowing that sexual behavior is a major determinant of sexual and reproductive health and taking into account all problems connected with investigating sensitive topics such as sexual behavior (first of all discomfort and lack of privacy in the study) and dealing with the STIs care and prevention that are often accompanied by stigma and shame (39-43).

Sexual educational programs as the major tool for improving sexual health, especially for improving the prevention of sexually transmitted diseases is accepted differently among different age groups of the population in various European

countries. Also, a political context within each country still exerts a strong influence. In countries such as Denmark and the Netherlands, sexual education is widely accepted and supported, while objections are forcefully made in countries such as the Czech Republic, Germany, Ireland and Poland (44). The results obtained in the present study definitely point to the need for additional education on the protection from and on the risk factors favoring the occurrence of STIs, which should address sexually active individuals of all age groups. Each contact by individuals with health professionals, from the teenage years throughout the following years should be used as an opportunity for adjusting prevention activities and counseling. Mass media should play an important role in delivering the information about the possibilities of protection from STIs and about risk factors favoring their occurrence to the whole population. Nongovernmental organizations should increase the awareness about the problem in specific subgroups of the population and the school-based and university-based programs should reach the young generations. In all educational messages, the role of condoms in reducing the risk of almost all STIs, including HIV, should be emphasized, as in this way the harmful sequels of these diseases affecting the reproductive health of sexually active individuals are prevented, and this is of paramount and nationwide importance.

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