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## Sexual Behaviour of Heroin Addicts In Treatment

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### *Summary*

Addicts are a high risk group for diseases transmissible sexually or through the blood. Their pathological behaviour caused by addiction makes it a priority to collect information about the sexual conduct of addicts, especially those who are trying to cure themselves. It is important to get results about how they assess the risks related to certain kinds of behaviour and how they see the need to be educated about the issue. The aim of this study is to determine the sexual behaviour patterns of heroin addicts who have already begun treatment, while getting insights into how they assess the risks associated with being sexually active, and whether they need to be informed about the whole issue. According to the survey, heroin addicts displayed an uncritical attitude towards the risk assessment of their sexual behaviour and failed to understand that they need to be informed about protection.

*Key Words:* Sexual behaviour, Heroin addicts, Addiction, Drug abuse

### **1. Introduction**

The World Health Organization defines addiction as a state of physiological or psychological dependence on any psychoactive substance [39]. This state is characterized by changes in behaviour and other psychological reactions, always including the compulsive need for occasional or regular substance use, guided by the pleasant psychological effects of the substance or, at least, of avoiding abstinence symptoms. Addictive behaviour is a major medical, psychological and societal problem, especially in view of the increasing incidence and availability of drugs. Although most epidemiological studies have depicted an increasing trend in drug abuse incidence among adolescents, only a small proportion have explored causation or tried to explain the nature of addictive behaviour or possible predictive factors [2,30,38,33]. By bringing together all the findings from the literature, we are able to conclude that the abuse of psychoactive substances is a

complex problem, and that both the inclination towards 'experimenting' with psychoactive substances and regular consumption itself result from the simultaneous impact of various interconnected factors. In other words, none of the aetiological factors appear to be decisive in a way capable of determining the individual's experiences with psychoactive substances independently of other factors [32, 5, 11].

The extent of drug abuse in Croatia has reached the levels of some West European countries. On the basis of epidemiological data and the data provided by the judiciary and by a repressive law enforcement system, the number of people addicted to illicit substances in Croatia has been estimated at 13,000 (a rate of 2.7 per 1,000 population). This figure is based on calculations which go to show that there is one non-treated for each treated heroin addict (around 6,000 in each category). This 1:1 ratio corresponds to the ratios calculated for other countries, where the heroin type of addiction prevails, but where methadone treatment has a broader

application [29]. Moreover, the Dutch experts think that, due to the administration of methadone in the programme (together with all other available forms of treatment), it is possible to attract and thereby register a proportion as high as 70% of opiate addicts [21].

As to the number of heroin addicts, the rate in Croatia is even higher than in some West European countries, since 80% of the addicts who are treated in Croatia suffer from heroin addiction. For all illegal substances, the rate of addicts per 1,000 population is 1.7 in the Netherlands, 4.0 in Switzerland, 4.7 in Italy, 2.7 in France, and 2.5 in Slovenia [21,22].

Abused drugs have several effects on sexual behaviour, which are related to the type, quantity, modality of assumption, and duration of abuse. Specifically, those under the influence of drugs may fail to practice safe sex, so increasing the risk of acquiring sexually transmitted diseases (STDs) and unplanned pregnancies. In recent years, many studies have been carried out to explore the association between drug use and the risk of contracting STDs, including HIV infection [27].

It is clear that a significant degree of sexual concern exists in male and female heroin addicts in the predrug, drug and postdrug periods. The Sexual Concerns and Substance Abuse Project recommends that each opiate abuser entering into treatment has a brief sex history taken and, if a primary or secondary sexual dysfunction is detected, then an additional evaluation should be formulated [31].

Much of what is known about the sexual partners of substance abusers comes from studies on alcoholics [35, 17]. Comparatively little research has been carried out on the sexual partners of heroin users [19, 28].

## 2. Methods

The aim of this study has been to collect information about the sexual behaviour of heroin addicts who have already been treated, and to recognize differences between the addicts who use condoms and those who don't.

The research project was performed for the Department for the Prevention of Addiction Diseases at the Public Health Institute of Split, in Dalmatia county, Croatia. It covered 100 examinees who are heroin addicts and who are in the outpatient care programme.

The majority of the examinees were on substitution therapy (methadone, buprenorphine).

The project was based on the use of a questionnaire which has three parts. Part One covers general and sociological information about the patient. Part Two deals with characteristics related to the misuse of drugs and possible complications. Part Three covers a set of questions related to the sexual habits and behaviour of heroin addicts who are in the treatment programme.

Of the 100 examinees in the study, 90 were males and 10 females.

All analyses were performed using the SPSS 10.0 programme including t-tests. Pearson's Chi square analyses were performed to determine significant statistical differences ( $p < 0.05$ ).

## 3. Results

### 3.1. Sociological details

The examinees were mostly males (90%), while females were much less well represented (10%). The average age was  $33.2 \pm 5.8$  (20-52) years; 57% of those in the group were unmarried, 29% were married and 14% had divorced. 40% of the examinees had children. Those chosen for the study had had 64 children altogether; 33% of these children were born while their parents were still married. Of the examinees who have had children, 25% of them had one child, 13% had two children, 3% had three children and 1% had seven. 23% of these children were living with both their parents, while 10% were living with their mother, and 1% was living with his/her father, while the rest of the children were living in one of various combinations of nuclear and extended families.

### 3.2. Drug abuse and their complications

The average age of first-time users is  $19.8 \pm 5.1$  (13-42) years. On average, they had been using drugs for  $13.4 \pm 5.5$  (2-30) years.

Abstinence from heroin use was found in 28% examinees, while 72% of them were unable to stop using heroin.

The methadone programme included 89% of the examinees, while the remaining 11% were taking buprenorphine.

All the examinees were heroin addicts. 29% of them were taking heroin intravenously, 7% by sniffing and 5% by smoking. 5% of these addicts take heroin by smoking and sniffing, while a total of 83% of these heroin users take heroin in a way that combined smoking, sniffing and intravenous injection.

Beside heroin, all the examinees were taking at least one other illicit psychoactive substance; most of them displayed polytoxicomania. Heroin was being used in combination with derivatives of cannabis, cocaine, amphetamines and ecstasy. As many as 21% were taking LSD, along with that same combination of drugs, while 19% added inhalation substances. 15% of the examinees were adding a combination of derivatives of cannabis and cocaine, while 9% were only adding derivatives of cannabis. Other types of polytoxicomania were found to be present in only a very small percent-

age of the group.

When taking heroin intravenously, 76.5% of these drug users shared their syringes with other users (2.35% once, 52.9% rarely, 21.1% often), while 23.5% of them had never shared their syringes.

During sexual intercourse, 16% of examinees used condoms as a form of protection against STDs, and 28% never used protection, while 56% claimed that they had sometimes used condoms as a means of protection against HIV and STDs. 99% of the examinees showed tattooing and piercing of the face and body; 38% of addicts participated in blood donation.

67% of heroin addicts have occasionally undergone testing for hepatitis and AIDS. 24% of addicts were tested only once, while 9% of them had not been through any testing at all. Their view was that it is unnecessary, or they were afraid of the result, or they simply did not care about it, or they found no good reason for being tested.

To the best of the knowledge of the examinees, 29% had tested positive to hepatitis B, and 61% tested negative, while 10% of them provided no information about their being positive or negative.

As many as 58% of the examinees tested positive to hepatitis C, and 34% tested negative, while 8% did not know whether they had contracted the disease or not.

Based on their knowledge, 90% of the group reported that they had no kind of sexually transmissible disease.

One drug addict was HIV-positive, while 88% of them claimed they were HIV-negative.

The other 11% of these drug users possessed no information about being HIV-positive or negative.

According to their personal evaluation, 65% of these drug users estimated that they were running a very low risk of contracting STDs and/or infectious diseases. 4% of those in the group thought that the risk of contracting transmissible diseases of this type was very high. The other examinees claimed that the risk could be evaluated as being somewhere between very high and low; the majority in this group gave an evaluation that was closer to a very low risk of contracting STDs or infectious diseases.

The largest subgroup of examinees (45%) thought that there was no need to obtain more information about the possible risks of contracting and transmitting STDs and/or infectious diseases, while 33% said they felt very little need to get more information about the whole issue, while 16% of them thought there is a need to be better educated about the problem.

### 3.3. Sexual behaviour

All of the examinees had been sexually active in an earlier period, 79% of them as teenagers, with an

average age at first sexual contacts of  $16.24 \pm 2(12-21)$  years; 97% of these heroin addicts had had sexual contacts with partners of the opposite sex, 1% had had contacts with partners of the same sex, while 2% had had sexual contacts with partners of the same and the opposite sex.

99% of these drug addicts were heterosexually oriented, whereas 1% were homosexually oriented.

11% of the group showed no inclination to change partners, 37% favoured only rare changes in partner, 37% showed an inclination to change partners occasionally, and 18% showed a wish to change partners frequently.

90% of the group had had frequent sexual intercourse – 9% of them once a day, 42% once a week, 34% once a month and 5% once a year; 10% had not had sexual intercourse during the previous year.

24% of the group had received payment for their sexual services; all of these were males; 14% of them did this rarely and 10% frequently.

During sexual activities 91% of the group used psychoactive substances occasionally, 3% always used them, and 6% of them had never used them.

The majority of the males in the group (63%) assessed their potency as high.

70% of the females in the group had a regular menstrual cycle, 20% of them had had one or more spontaneous miscarriage (the overall figures for miscarriages and abortions were equal) (Table 1.)

In relation to the use of condoms as a form of protection against diseases transmissible sexually or through the blood, the examinees were classified in two subgroups according to the risks they had taken. One subgroup (16%) had always used condoms during sexual intercourse and therefore had run no risk of contracting diseases transmissible sexually or through the blood, whereas the other group (84%) had run a certain risk of contracting such diseases; of these, some (28%) had never, and others (56%) had sometimes, used condoms as a form of protection (Table 2).

We were unable to demonstrate any statistically important connection between the use of condoms and the time when those in the study had had their first sexual experience (as a minor, or as an adult) ( $\chi^2=3.12$ ;  $p=0.077$ ).

It is statistically important that the examinees that use condoms less frequently or sometimes changed their partners ( $\chi^2=8.4$ ;  $p=0.004$ ).

We have not yet been able to prove the significance of the relationship between the use of condoms and the frequency of sexual intercourse ( $\chi^2=0.401$ ;  $p=0.527$ ).

Parenthood is not statistically significant in relation to the use of condoms ( $\chi^2=0.73$ ;  $p=0.393$ ).

We have not yet been able to prove any statistically significant connection between the use of condoms and

Table 1. Sample characteristics	
	N and %
<b>1. Demographic data</b>	
Gender	
Male	90
Marital status	
Married	29
Single	57
Divorced	14
Parenthood	
Yes	40
<b>2. Drug abuse and complications</b>	
Way of taking heroin	
Sniffing	7
Smoking	5
Sniffing and smoking	5
In combination with intravenous	83
Sharing of syringes	
Once	2
Rarely	53
Frequently	21
Never	24
Testing for hepatitis/AIDS	
More than once	67
Once	24
Never	9
Hepatitis B	
Positive	29
Negative	61
No knowledge	10
Hepatitis C	
Positive	58
Negative	34
No knowledge	8
AIDS	
Positive	1
Negative	88
No knowledge	11
STDs	
Yes	90
Subjective assessment of a presence of risks	
Yes	35
On need to be informed	
Yes	55
<b>3. Sexual behaviour</b>	
Use of condoms	
Yes	16
Never or sometimes	84

First sexual experience	
As a minor	79
As an adult	21
Multiple partners	
Never or rarely	48
Sometimes or often	52
Frequency of sexual intercourse	
Never, monthly or yearly	49
Daily or weekly	51
Payment for sexual services	
Yes	24
Whether a blood donor	
Yes	38
Substance abuse	
Occasionally, always	94
Never	6

blood donors ( $\chi^2=0.330$ ;  $p=0.565$ ). Nor have we been able to prove any statistically significant connection between the use of condoms and the frequency of testing ( $\chi^2=0.570$ ;  $p=0.449$ ).

So far we have been unable to prove any statistically significant connection between condom use and being paid for sexual activities ( $\chi^2=1.4$ ;  $p=0.241$ ). Nor have we been able to prove any statistically significant connection between condom use and subjective assessment of the risks involved ( $\chi^2=0.118$ ;  $p=0.732$ ).

We have not yet been able to prove any statistically significant connection between the use of condoms and being adequately informed ( $\chi^2=1$ ;  $p=0.315$ ). Nor have we been able to prove any statistically significant connection between the age of examinees and the use of condoms ( $t=0.584$ ;  $p=0.561$ ).

The subgroup of examinees who never or sometimes used condoms were younger than those who used condoms ( $t=2.012$ ;  $p=0.048$ ). A group of examinees who never or sometimes used condoms turned to be younger at the time of their first sexual experience than the subgroup who always used condoms ( $t=1.86$ ;  $p=0.066$ ).

#### 4. Discussion

##### 4.1. Sociological details

Within the group there were many more males than females. This finding is in accordance with the overall proportions of genders among addicts in treatment in the same institution.

Many studies have shown specific differences in

Table 2. Numbers of examinees and average values of variables, as assessed according to the use of condoms

		Use of condoms		p
		Always (N=16)	Never or sometimes (N=84)	
First sexual experience	as a minor	10	69	0.077
	as an adult	6	15	
Multiple partners	never or rarely	13	35	0.004
	occasionally or frequently	3	49	
Frequency of sexual intercourse	never, monthly or yearly	9	40	0.527
	daily or weekly	7	44	
Parenthood	yes	8	32	0.393
	no	8	51	
Whether a blood donor	yes	7	30	0.565
	no	9	53	
Whether tested for hepatitis/ AIDS	yes	9	58	0.449
	no	6	25	
Payment for sexual services	yes	2	22	0.24
	no	14	62	
Subjective evaluation of a presence of risks	yes	5	30	0.73
	no	11	54	
On need to be informed	yes	6	43	0.315
	no	10	41	
Age at first sexual intercourse (year)	mean $\pm$ SD	17 $\pm$ 1.8	16 $\pm$ 2	0.048
Length of drug use (years)		11.1 $\pm$ 4.6	13,9 $\pm$ 5,7	0.066
Age (years)		32.4 $\pm$ 7.7	33,4 $\pm$ 5,4	0.561

substance use and sexual behaviour between genders [4,3]. The average age of the examinees in outpatient treatment is high ( $33.2 \pm 5.8$ ).

In other outpatient centres there is a significant older population [10].

Even though most of the examinees were married, only about one third of them were still living with their spouse. Considering all the examinees, we found they had had 64 children altogether. One third of these children came from a marriage. These findings are the outcome of relatively well-preserved traditional and family values, which do not take dependency problems into account.

Most research findings support the view that heroin addiction is a major public health problem affecting both the addicted individuals themselves and their children, who have been shown to have a poor social, educational and health status, and to run a higher risk of abuse than their peers [20].

#### 4.2. Drug misuse and complications

The period of earliest heroin use covers a wide

range, but the average age at which drugs were first consumed by this group of addicts almost goes further back than adolescence. This is because of the long experimental phase with other psychoactive drugs. This finding is supported by the research done on the consumption of drugs by young people, which shows that the mean age of first consumption comes in early adolescence [12].

At the same time the average duration of drug use is very high, as can be shown in various ways. Firstly, drug dependency is a chronic illness with remissions and recurrences. Secondly, dependency itself means that patients have to stay in treatment programmes over a long period. During the study, one third of the examinees reached the stage of abstinence, and most of these were in the methadone programme. They were older patients with many years of drug-taking, and their mental and physical state made the treatment less effective. Thirdly, methadone has been prescribed in this region of Croatia for the last fifteen years as a way of maintaining abstinence, while the prescription of buprenorphine only began three years ago [16, 36].

One of our concerns about the results of this study

is that they reveal that many of the examinees suffer from polytoxicomania, which makes the treatment process more difficult, so raising the risk of overdoses. Polytoxicomania has been found in all groups of drug users [23, 24].

A high percentage of intravenous drug users, a high percentage of sharing of drug use requisites during heroin consumption, the practice of tattooing and piercing, and a low percentage of drug users who practice safe sex, all increase the risk of acquiring sexually transmitted diseases (STDs) [24].

Research has shown that participation in a programme does not necessarily mean that examinees will take special precautions to prevent sexually transmissible diseases. Most studies show a very low percentage of drug addicts who use any form of protection during sexual intercourse [8].

Most studies show a very small percentage of drug addicts who use protection during sexual intercourse [13].

In contrast to this, there is a surprisingly high percentage of examinees who donate blood and a high percentage who have undergone testing for hepatitis or AIDS. It may be questioned whether these results are due to the initiative of patients or to the efficiency of the health service. Research shows that test-taking was more highly correlated with high-risk injection behaviour than with sexual behaviour [15].

There is a significantly high percentage of correlation linking hepatitis C and sexually transmissible diseases with hepatitis B and AIDS.

The epidemiological situation is different, because a certain number of examinees have no knowledge about the disease or have only been tested once.

Most studies reveal the high incidence of hepatitis C among drug addicts, and the prevalence of hepatitis among those suffering from sexually transmissible diseases [7, 1, 25].

At the same time the assessment of most examinees is that they only run a small risk of contracting diseases that are transmissible sexually or through the blood. As a result, they feel no need to be informed about the issue.

Education about the effects of drugs on sexuality and the risks of contracting sexually transmissible diseases [9], together with learning new ways of behaviour, lay a foundation for preventive action and harm reduction in dealing with this problem [14].

#### *4.3. Sexual behaviour*

Most examinees had their first sexual relations when they were still minors, they are mainly heterosexual, and half of them often change partners. This is in accordance with the behaviour of addicts in other studies [23].

As adolescents attempt to develop intimate sexual relationships, they may be at high risk of health consequences associated with sexual activity, such as pregnancy and sexually transmitted diseases (STDs) [6, 34].

Many studies have been carried out on forms of social and sexual sharing among addicts [19].

The degree of satisfaction with sex life was similar in patients and the rest of the population [36, 26]. Half of the examinees state that they have frequent sexual relations. At the same time, one quarter of them are paid for their sexual services.

Among the addicts there are two types of transaction: sexual services for money and sexual services to acquire drugs [13]. Most addicts use drugs during their sexual activities [24, 27, 9].

Under the influence of drugs they may fail to practice safe sex, so increasing the risk of acquiring sexually transmitted diseases (STDs) [27].

Among addicts, many hold the opinion that certain drugs increase their sexual performance, libido and pleasure, but are responsible for their partners' abusive and coercive behaviour [9].

More than half of the examinees reported improvement in sexual behaviour while using drugs. Almost all these patients remained sexually active and took no special precautions to prevent sexually transmitted diseases. Almost all patients remained sexually active and took no special precautions to prevent the contraction of sexually transmitted diseases [19, 24].

Comparing two groups of examinees, where the first always uses condoms, while the other group rarely or never uses them, there is statistically significant difference in the variables: change of partner, age of first sexual relations, duration of drug use.

The addicts who never or rarely use condoms and often change partners are younger at the moment of their first sexual experience, and they have been addicted for a longer time.

Conversely, the group of addicts who always use condoms and never change partners are much older at the moment of their first sexual experience, and they have been addicted for a shorter period of time.

It must, however, be pointed out that both groups are completely uncritical towards their sexual behaviour, because no significant differences emerge in important variables such as: parenthood, being a blood donor, testing for hepatitis and AIDS, being paid for sexual services and subjective assessment of the risk of contracting STDs.

## **5. Conclusion**

Addicts have a dynamic sexual life, and they mostly fail to use any form of protection against STDs or blood-

born illnesses. Even addicts who do use protection are uncritical towards other risks to health, and towards other, more social forms of risk-taking.

As addicts assess the risks as being very small, and they feel little need for information, there is a real need to educate them in order to increase their knowledge and skills in dealing with the risks of addiction and drug-conditioned sexual behaviour.

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### Contributors

All the authors contributed equally to this work.

### Conflict of Interest

The authors have no relevant conflict of interest to report in relation to the present study.

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