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**EXPLORATIVE STUDY ON RISK FACTORS
CONTRIBUTING TO HIV INFECTION IN
INTRAVENOUS DRUG USERS POPULATION
IN YEREVAN, ARMENIA**

By

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ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
ATLAS/ti	Scientific Software Package for Qualitative Analysis
CSW	Commercial Sex Workers
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
IDU	Intravenous Drug Users
IVDU	Intravenous Drug Use
JHU	Johns Hopkins University
SES	Socioeconomic Status
STD	Sexually Transmitted Diseases
TB	Tuberculosis
UNAIDS	Joint United Nations Programme on HIV/ AIDS
UNDP	United Nations Development Programme
UK	United Kingdom
USA	United States of America
WHO	World Health Organization

ABSTRACT

Introduction: Despite overall declines in AIDS incidence and mortality in several developed countries, HIV incidence continues to rise in many marginalized populations, such as intravenous drug users (IDU). Although IDU account for only 5-10 % of the cumulative adult HIV infections worldwide, diffusion of injection drug use and HIV has occurred on every continent. According to the National Center for AIDS Prevention, in Armenia, 30% of the 102 HIV cases registered by October 1, 1999 constitutes intravenous drug users. For the recognition of public health significance of HIV infection among IDU understanding of the links between HIV and substance abuse is essential. Since little is known on this issue, an ethnographic study was conducted with the goals of contacting and understanding the IDU population. Research was intended to explore drug using patterns and general characteristics of intravenous drug users in Yerevan and to find possible connections between those characteristics and infection with HIV.

Methods: Qualitative research techniques such as semi-structured in-depth interviews and key informant interviews were used. Injecting drug users were recruited through adaptive, multisite snowball sampling. A total of 22 ethnographic interviews were conducted during the period from June through September 1999 in Yerevan among intravenous drug users to explore direct patterns of drug use and other specific IDU behavior practices in greater depth. In addition, two key informants were chosen to gain understanding of injecting patterns in Yerevan: the Deputy Director of Republican Narcologic Center of the Ministry of Health and the Deputy Head of Department on Combat Against Illicit Drug Trafficking of the Ministry of Interior Affairs. Obtained data were analyzed using ATLAS/ti, computer software package for analysis of qualitative data.

Results: Data suggest that IDU in Yerevan seem to be at risk of HIV acquisition due to their personal, behavioral, social, and drug use characteristics. The majority of IDU started to inject drugs under the influence of their peers/pushers and continue it due to developed addiction. IDU have a rather incomplete and hypothetical knowledge about HIV/AIDS and perceive the problem as an abstract one that “could touch everybody but not themselves”. IDU behaviors were far from being safe and healthy. Most often they reported sharing of needles and syringes with their close friends, do not clean used needles and syringes, and do not use condoms with both primary and casual partners.

Recommendations: Further research with the employment of social network samples of active drug users is needed to identify the natural context of drug use profiles, such as needle sharing, sexual relationships, preferences, and habits that might influence HIV acquisition and transmission. The use of mass media is suggested to increase awareness of the general population on drug and HIV-related issues.

1. INTRODUCTION

1.1. Background

Following detection of the first cases of AIDS in the early 1980s, HIV infection continues to affect people all over the world. Despite overall declines in AIDS incidence and mortality in several developed countries¹, HIV incidence continues to rise in many marginalized populations, such as intravenous drug users (IDU). Although IDU account for only 5-10 % of cumulative adult HIV infections worldwide, diffusion of injection drug use and HIV has occurred on every continent^{2,3}. Of 126 countries reporting injection drug use in 1997, 98 have detected HIV among IDU⁴. Injection drug use is the predominant mode of HIV transmission in most of western and eastern Europe and in parts of Asia^{1,5}. Taking into account direct transmission of HIV among IDU through sharing of contaminated injection equipment, and its indirect transmission to sexual partners and offspring, injection drug use accounts for 44% of reported AIDS cases in Europe⁶, and nearly one-third of cases in the USA¹ and South America⁷.

In Armenia, existence of the problem of injection drug use was openly accepted only five to six years ago; the collapse of Soviet Union let “driven underground” illicit activities to be visible in a full extent. According to the National Center for AIDS Prevention⁸, in Armenia, 30% of 102 registered by October 1, 1999 HIV cases constitutes intravenous drug users. The recent trends in increase of the injection drug use incidence would pave the way for spread of HIV and other infections transmitted via blood. According to experts’ estimates there are 4,000 IDU in Armenia⁹. It should be mentioned, however, that real extent of HIV and IDU epidemics in Armenia is underestimated due to reliance on mostly passive HIV and IDU surveillance systems. Active surveillance among high-risk groups of population is limited due to scarcity of resources and difficulties to reach to hidden populations. WHO experts suggest that in countries where assessment of the real extent of drug abuse is hindered, registered numbers should be multiplied by 10 to gain the real number of IDU.

The prevalence of IDU and the severity of its risks for HIV transmission are fueled by poverty, social dislocation, and political instability¹⁰. Socioeconomic, legal and political factors, as well as migration contribute markedly to increase in drug injection. The market reforms and political restructuring which took place in Armenia as well as in other Republics of the former Soviet Union in the early 1990s were followed by poverty, huge increases in income differentials and unemployment, collapses in existing infrastructures including health care systems, as well as shifts in ideology and loss of social values⁴. Economic migration and war led to increased population mobility to the neighboring regions where the situation with drug and HIV epidemics worsened in a greater extent than in Armenia. For example, the number of IDU in Odessa, Ukraine, increased from approximately 6,000 in 1990 to 40 000 in 1997, whereas HIV incidence increased markedly from 50 cases in 1994 to 12,228 in 1996, and to 15,000 in 1997. The majority of these infections were detected among IDU⁶.

With regards to the Russian Federation, by the beginning of 1999 there were 10,000 registered HIV cases among which IDU consisted of 90%. In Belarus, among several thousands of IDU 6.7 % were HIV positive in 1996. In Moldova, intravenous drug usage increased by 10 times from 1991 until 1998 and IDU consist of 84 % of all registered HIV cases⁶. In Georgia there were 4,260 registered HIV positive cases by March 1999 and 67 % of them are IDU⁶.

Currently, the flow of temporary labor migration from Armenia has slowed to 60,000-70,000 per year¹¹. The average unemployment rate, however, keeps increasing; in 1995 the average unemployment rate in Armenia was 6.7%, and in 1996 and 1997 unemployment rates approached 9.3% and 10.8% respectively¹¹. Indeed, unemployment and high migration in search of work out of Armenia contributed markedly to the increase in HIV incidence; the majority of HIV positive IDU acquired the infection far from their homes⁸. Moreover, risk factors associated with injection drug use go far beyond the individual user as soon as emigrants returned back to Armenia. Because the majority of IDU have families in Armenia, they engage in sexual contacts with their non-drug injecting spouses thereby contributing to as a major source of heterosexual and perinatal HIV infections.

In addition, international drug markets use well designed channels for rapid expansion and creation of new markets¹⁰, and Armenia could be considered as one of them exposed to drug injecting practice and, thus, at increased risk of HIV infection. According to the Ministry of Interior Affairs, there is a growing tendency for Armenia to become a transit country for illicit drug trade, and the main countries of drug export to Armenia are Iran, Russia, Turkey, Central Asian Republics, and Ukraine. In 1998, there were 641 registered cases of illicit drug trafficking in Armenia.

Stimson G.V. and Chooponya⁴ emphasize, that patterns of drug use which vary markedly over time have certainly played a crucial role in the dynamics of HIV and drug epidemics. Also, since about 1998, heroin use has become increasingly widespread in Europe and the UK¹². In Armenia a change in patterns of drugs used is also noticed; in the past two years the use of heroin and cocaine increased greatly. During 6 months in 1998 about 451.73 grams of opium and 62.83 grams of heroin have been confiscated, however during 6 months in 1999 these numbers increased to 1091.1 grams and 176.65 grams respectively⁹.

It is worth noting that the incredibly high costs of these drugs appear to be the restricting factor for illicit drug use. For example, now in Armenia one gram of heroin costs about \$150-250, whereas, in neighboring Turkey the cost of one gram of heroin is \$15, and in the Russian Federation it costs about \$30. Although the high cost of drugs somehow restricts their usage, in some cases it increases criminal activity aimed at getting access to large amounts of money for buying drugs. Indeed, the Ministry of Interior Affairs reports that in the past year in Armenia there was increase in criminal behavior (both theft and murder) to obtain money for drugs. For example, a total of 690 crimes and offenses connected with drugs have been registered in 6 months of 1999, whereas for the same period of 1998 there were about 657 crimes and offenses registered.

In addition, prohibitive drug policies also affect patterns of drug use in ways that increase individual and public health risk. The necessity to find drug for injection fosters drug addicts' specific patterns of behavior known to increase HIV transmission, and the most important among these are the sharing of scarce injection equipment and increased sex activities to get money for drugs¹⁰. A recent survey revealed HIV prevalence of 7.5% among commercial sex workers (CSW) in Yerevan¹³. Although there is lack of information on drug use patterns among CSW in Yerevan, multiple studies conducted throughout the world suggest that women working on the street are more likely to have an IDU as a sexual partner or be IDU themselves¹⁴.

Stigmatizing and marginalizing the drug user also presents barriers to access medical and social services isolating the drug user from education, prevention, and drug treatment¹⁰. The 229 clause of the current Criminal Code of the Republic of Armenia considers criminal charges and penal sentences up to 5 years of incarceration for use and/or possession of illicit drugs. As Mkrtich Khachatryan, the Deputy Director of the Republican Narcologic Dispenser, pointed out their wards are empty; IDU don't seek medical care since they are afraid of being arrested. In addition to the Criminal Code, drug addiction is unacceptable by the society as well; injecting drug use is viewed from the criminal justice standpoint, not from a public health standpoint. Thus, being "driven underground" by political, social, and legislative norms, IDU are at substantial risk not only in terms of untreated drug abuse and other diseases, but also in terms of less opportunity to receive any information on reducing the harm of their habits.

Given all the above-mentioned factors, conditions are present in Armenia for an HIV epidemic among the intravenous drug using population in the near future. The overwhelming evidence from many studies being done worldwide suggests that the introduction of HIV into the drug using population and the rapid increase in heroin injection in this community might trigger an explosive HIV epidemic among IDU.

Experience in other countries has shown the extent to which epidemics, once triggered, can develop extremely rapidly. For example, between 1995 and 1996, HIV prevalence among IDU in Odessa and Nikolaev, Ukraine, increased from less than 2% to 31% and 57%, respectively¹⁵. Approximately 100,000 HIV infections were identified in the Ukraine in 1997, primarily among IDU¹. In Kaliningrad, Russia, numbers of HIV infected IDU increased from a few hundred to over one thousand within one year¹⁶.

The societal cost of injecting drug use includes the cost of drug treatment, loss of productivity, broken families, mentally retarded offspring, accidents (particularly motor vehicle), crime, and stolen property. With the lifetime societal cost of HIV infected person estimated at approximately \$119,000 for developed countries¹, and the number of HIV positive IDU growing day in day out⁸, HIV among IDU will exact a growing economic investment in the coming years.

The public health significance of HIV infection among IDU cannot be fully understood, unless the recognition of the links between HIV and substance abuse, and the relationship between

HIV infection among IDU and transmission to sexual partners and children are entirely made. Thus, control of HIV spread among IDU is critical for the long-term control of the HIV epidemic in the population as a whole. According to Des Jarlais and colleagues¹⁷, in low-seroprevalence areas it appears possible to substantially limit transmission of HIV among IDU despite continuing risk behavior among a large proportion of the population. There is now consistent and strong evidence that the prevalence of HIV infection among Australian IDU is still low and the most plausible explanation for the low prevalence of HIV is the early implementation of a comprehensive range of prevention pros designed to reduce the spread of HIV in this population¹⁸. Control of HIV infection in Australian IDU represents one of the major triumphs in this country and probably reduced the present cumulative number of AIDS cases by 11,000 and expenditures by at least \$60 million.

The potential spread and consequences of HIV infection among IDU in Armenia are even more profound than in other countries, especially in western ones, because of its proximity to drug producing areas, economic instability, current legislative basis hindering drug abuse treatment, and decision-makers conservative attitudes in adopting and implementing new policies aiming to reduce the spread of HIV.

1.2. Intravenous Drug Use and HIV Risk: Current Literature Analysis

Multiple studies have been conducted worldwide to identify risk factors for HIV infection among IDU. Injection drug use and HIV transmission have been referred to as twin epidemics¹⁰. HIV is primarily transmitted between IDU by the inoculation of an HIV-negative IDU with traces of blood from a contaminated syringe or other drug paraphernalia previously used by an HIV infected individual¹⁹. Thus, sharing of contaminated injection equipment is the primary route of transmission of HIV infection. In order to make it possible to design HIV prevention interventions more effectively it is necessary to understand predictors of needle sharing. Various research studies have shown that certain factors contribute significantly to the sharing of needles and syringes, and other drug paraphernalia among injecting drug users. According to Klee and Faugier²⁰, age and length of drug use were important factors in sharing, which was least prevalent among older IDU with a long-term history of drug injection. In addition, the majority of sharers are most likely to share syringes with sexual partners and close friends²¹. However, conflicting views exist in the literature, suggesting syringe sharing appears to be related to social circumstances and life-style factors rather than just individual behavior characteristics and motivation. In the article by Donoghoe, Dolan and Stimson²² several factors mentioned to be related to syringe sharing, including: type of drug injected, frequency of injection, accommodation and contact with other injectors, means of financial support and recent involvement in crime, employment of HIV protective strategies, treatment contact with general a practitioner, number of sexual partners and injecting status of sexual partners. Indeed, more recent studies concentrate on the social context of illicit drug injection behavior and their relationship to HIV infection. Injection setting (friend's residence, semi-public areas) and frequency of injecting with

others have been associated with frequency of sharing uncleaned needles as well as failure to clean or not always cleaning used needles before injection²³. In addition, evidence of social factors such as pressure from drug using peers and sexual partners, and preferences and habits have been shown to be significantly associated with the risks for HIV transmission (e.g., the increased likelihood of sharing injection equipment)²⁴⁻²⁵.

As an alternative way of reduction of HIV transmission associated with reuse and sharing of injection equipment by IDU bleach cleaning of injection equipment has been recommended²⁶, although some controversy exists, the data indicate the ineffectiveness of bleaching in HIV risk reduction among both reusers and sharers²⁶⁻²⁸. Thus, disinfecting of injection equipment cannot be considered as a substitute for use of sterile injection equipment.

Multiple studies have shown that HIV seropositivity was correlated with a longer history of drug injecting, as well as with a daily dosage and frequency of injecting. In particular, injecting drug use for at least 2 years and injecting at least once every day were highly associated with HIV positive serostatus of drug users in a community in southwest China²⁸.

In addition, type of drugs injected and polysubstance abuse have been reported to be related to HIV risk-taking behavior²⁹. However, the type of drugs injected varied notably by place of residence. Recent trends in patterns of drug use in Eastern Europe have shown that the most commonly used drug is heroin¹². In addition, among drugs used cocaine, morphine, diazepam, ephedrine, and methadone, were often used in combination with alcohol. Polysubstance abuse is also reported to be common. According to Diaz and colleagues²⁹, in a sample of 1147 IDU, 75% injected more than one type of drug, and 85% reported non-injected drug use.

A recent survey of injecting drug users reveal that they are reducing their HIV risk, but changes in injecting behavior have been greater than those in sexual behavior³⁰. Indeed, IDU are at great risk of HIV acquisition through unprotected sex because drug abuse substantially lowers self-control and self-protection. In particular, in the study by Ross and Wodak³¹, both male and female respondents reported having more than 50% of sexual contacts while being under the influence of drugs. Moreover, extensive research has shown continued involvement of IDU in unsafe sexual behaviors being associated with exchanging sex for money or drugs, and using drugs to help meet sexual needs³². In addition, high-risk sexual behaviors, including prostitution, number of sexual partners, and infrequency of condom use were reported to be associated with being younger, having no children, being less employable, unmarried, and having more extensive lifetime substance abuse³³.

The greater frequency of sexual activity and the higher number of partners contribute to a higher incidence of sexually transmitted diseases (STDs). Data indicate the high prevalence of sexually transmitted diseases in IDU population primarily because many IDU continue to practice unsafe sex despite having adopted safer drug practices³⁴. In addition, multiple studies have shown that STDs increase by 2-3 times the transmission of HIV and so contribute to the high prevalence of HIV

in this population³⁴. Thus, given the importance of STDs as a co-factor, IDU are at increased risk of sexual transmission of HIV.

In addition to STDs, certain medical cofactors can also increase the risk of HIV infection; intravenous drug users may transmit and acquire bloodborne virus infections, including Hepatitis B virus (HBV) and Hepatitis C virus (HCV)³⁵. It should be taken into account here that along with sharing of needles, sexual transmission of Hepatitis B virus may contribute to the high prevalence of HBV within this group³⁶. With regards to HCV, although some controversy exists concerning the role of sexual transmission in HCV infection, it appears that sexual transmission plays only a minor role in HCV epidemiology³⁷. Intravenous infection with HCV may be the most frequent chronic infection in drug users and IDU are known as primary the reservoir of HCV in a community.

Tuberculosis (TB) is also a rapidly growing problem among injecting drug users that interacts with HIV infection in this population³⁸. The risk of activation of latent tuberculosis is substantially increased with HIV infection, as is the risk of transmission to uninfected persons in health care facilities, prisons and settings serving IDU³⁹. In Armenia the current TB diagnosis and treatment systems are inadequate. According to official statistics, there was an increase in the rates of tuberculosis in recent years in Armenia; in 1995 the tuberculosis rate registered was 93.8 cases per 100,000 population, whereas in 1996 and 1997 these numbers reach to 97.7 and 100.3 per 100,000 population, respectively¹¹. Ethnographic interviews suggested that many IDU are uninformed about TB and often misinformed about their personal TB status. In addition, IDU have been noticed to avoid seeking any type of health care for TB both diagnostic and curative because of the threat of TB-related involuntary detention, perceived lack of appropriate treatment, and fear of incarceration or lack of appropriate therapy to relieve the symptoms of withdrawal from drugs³⁸.

Overall, the course of HIV infection may be accelerated in active IDU for a various reasons. IDU typically present for treatment and are diagnosed with AIDS later in the course of their HIV infection than other risk groups⁴⁰, primarily because of limited or delayed access to care, poor compliance with that care, poor general hygiene, and other factors associated with a lifestyle typical of substance abusers. In particular, certain personality disorders may be associated with substance abuse and HIV risk behavior. In general, substance abuse often causes sexual disinhibition, impaired judgment, and impulsivity, all of which reduce the likelihood of abstinence, safe methods of injection practices among IDU, or the use of condoms. The most frequently seen disturbance is depression⁴⁰. In many ways, this psychopathology is the way of adapting to a chaotic world, in which IDU cannot find a place and realize their potentials.

It is believed that an availability of information on risk reduction and a personal risk assessment are effective in reducing risk behaviors associated with injecting. However, multiple studies have found that risk perception is unrelated to injecting or sexual behaviors, as well as previous history of sexually transmitted diseases, a range of demographic characteristics including age and gender, and the number of times tested for HIV⁴¹. On the contrary, there are also studies

suggesting that living with children, sex with an IDU partner, perception of health, having had STD, and results of HIV testing are significantly associated with HIV/AIDS risk perception⁴². Nevertheless, in the study by Woodhouse and colleagues⁴³, respondents were well informed but reported engaging in high risk behaviors frequently and, even, the majority perceived themselves to be at low risk for HIV infection. Overall, a review of recent studies has shown that reported changes in IDU injection practices and their sexual behavior have occurred to some extent. In addition, a significant trend is shown toward lower drug injection in HIV positive IDU than HIV negative ones. Seropositive IDU were also more likely to stop drug-injecting equipment sharing and to change their sexual habits; they reported an increased consistent use of condoms⁴⁴.

The diagram (Figure 1) presents the theoretical framework of possible relationships and links between HIV infection and injecting drug use (based on the analysis of current literature):

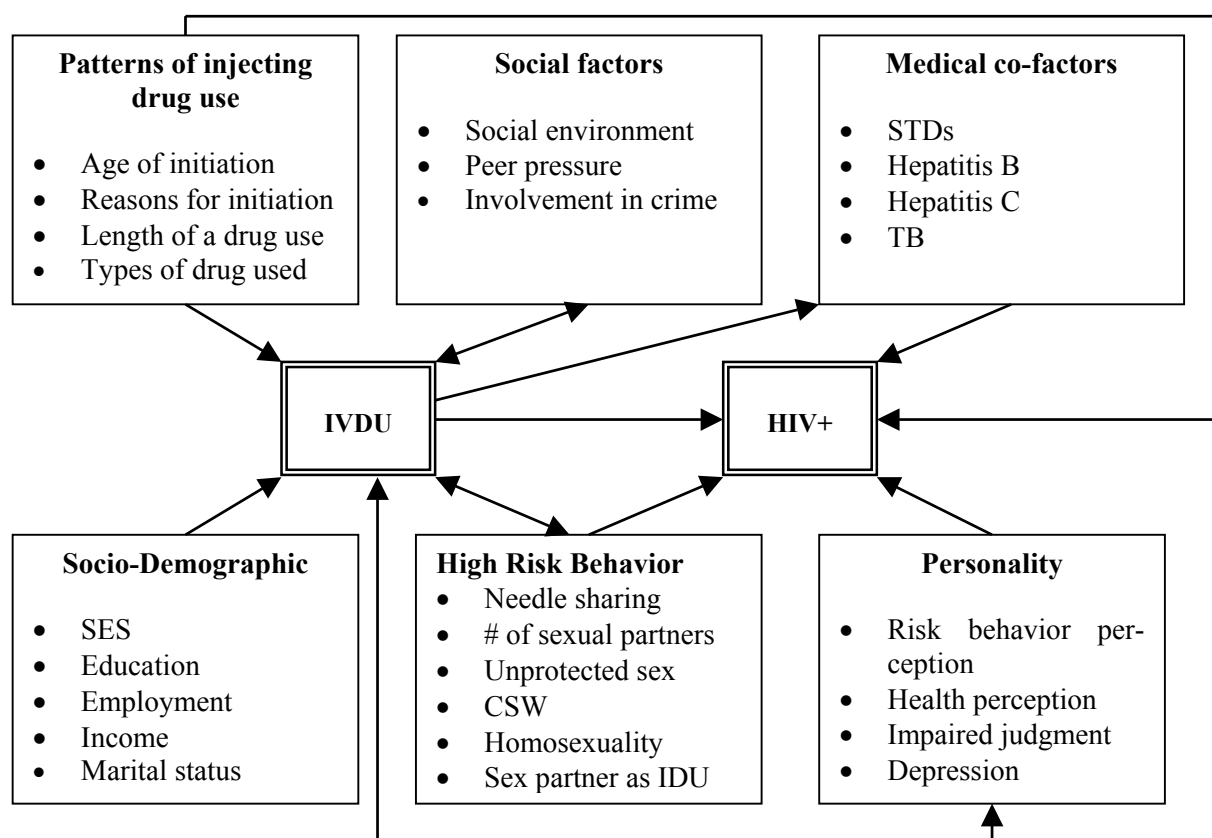


Figure 1. Relationships between co-factors contributing to HIV infection and injecting drug use

1.3. Research Questions

Prevention of IDU-associated HIV infection is critical for public health. Despite a substantial reduction in the level of high risk behavior among IDU presented in an impressive number of studies from many countries^{25,30,44,48}, HIV continues to spread among and from this population in both developing and developed countries¹, primarily because effective interventions are introduced too late or not at all. Armenia should learn from the experience of the Russian Federation, Ukraine, Moldova,

the United States, and elsewhere and invest resources, man-power, and money to prevent outbreaks of HIV infection from occurring in IDU and to limit its spread to the rest of the population.

In order to be able to implement a maximally effective intervention strategy, it is necessary to know and understand the real extent of the drug and HIV epidemics. Estimation of the risk of spread of HIV among and from IDU is necessary for planning a public health response accordingly by selecting prevention measures that are appropriate for local conditions. Since little is known on this issue, assessment of risk factors for HIV acquisition in the population of IDU in Yerevan is essential. An ethnographic study was performed with the goals of contacting and understanding the IDU population, and preparing the way for more rigorous studies on developing interventions for this target group. Thus, research questions of this study are:

- 1) What are drug using patterns including injecting use initiation, types of drugs used, form and frequency of drug use, social context of use and other factors that might contribute to HIV infection in intravenous drug using population in Yerevan?
- 2) What are the general characteristics of intravenous drug users in Yerevan including demographic, general health, personal, and social environment characteristics?

2. METHODS

2.1. Background

Studies of hidden populations such as intravenous drug users encounter difficulties worldwide because the members of that population are rare, isolated, and hard to reach. Since little, if any, is known on HIV risk factors in the intravenous drug users population in Yerevan, an exploratory study was chosen in order to gain preliminary insight and understanding of attitudes, motives, behaviors, perceptions, and beliefs of the target population. In addition, qualitative research is often the only appropriate tool for collecting sensitive and valid information from otherwise “closed” populations⁴⁵. Moreover, the nature of substance abuse as a complex social and legal phenomena including drugs used, people using them, context in which they are acquired and used, and social networks of drug users could be thoroughly understood by applying exploratory and descriptive scientific investigation. Indeed, epidemiological studies of risk are unable to gain the data necessary to understand the interaction between individual risk behavior and social network relationships⁴⁶.

Qualitative research techniques such as semi-structured in-depth interviews and key informant interviews were used for this study. Indeed, qualitative interviewing techniques are capable of providing valuable insight into the complexity and range of human attitudes, values and behaviors⁴⁷. In addition, it provides an opportunity to collect substantive and detailed information that otherwise is hard to obtain. The purpose of qualitative interviewing in this study was to understand how individuals who inject drugs and people who have to deal with that issue view the illicit drug use

problem, to learn their terminology and judgments, and to catch the range of their perceptions and experiences.

2.2. Sampling and Recruitment Procedures

Taking into consideration that injecting drug use is an illicit and covert activity in our society which is punished by the Law and stigmatized by members of society, individuals who use drugs do not readily and easily allow researchers to identify and enumerate themselves. Therefore, representative sampling is an extremely difficult approach to investigate drug use phenomenon.

It should be mentioned, however, that subgroups of the IDU population could be officially recognized and, by such, could become accessible to researchers for sampling and recruitment purposes, as a consequence of medical emergency, arrest, or entry into treatment for drug dependency⁴⁵. However, samples recruited through these settings are not generalizable to the hidden population of IDU as a whole (of which a large amount is less likely to access systems). For example, as it was estimated, IDU in drug dependency treatment facilities includes only 10 to 20 percent of the total intravenous drug abusing population⁴⁸. In Yerevan, for example, there were only 8 intravenous drug abusers in treatment in the Republican Narcologic Center during the period from July to August 1999. In addition, individuals who seek treatment for drug dependency are more likely to overrepresent chronic abusers, are less often involved in illicit drug use, more often employed, and otherwise leading a more healthy and stable life⁴⁵. With regards to IDU sampled from the criminal justice agencies they are likely to overrepresent the subpopulation of IDU who are involved in criminal activities to support their addiction. Indeed, injectors who are not chronically dependent, have sufficient legitimate sources of income to support their drug use, or who otherwise are able to escape contacts with the criminal system are likely to be underrepresented in samples recruited through this system⁴⁵. Review of conventionally designed large-scale surveys showed that they detect relatively few members of the population of injecting drug users, so that estimates of the target population characteristics had a high level of uncertainty⁴⁹. On the contrary, ethnographic studies are able to reach suitable number of individuals who inject drugs through the use of link-tracing, chain referral, or snowball sampling procedures⁴⁹.

In this study injecting drug users were recruited through adaptive, multisite snowball sampling. Preliminary contacts with possible participants were done either directly or through multiple chains of friends and referrals. First participants were recruited from the anonymous patients of the National Center for AIDS Prevention who have applied for HIV testing. Also, screening for possible participants and recruitment efforts were made among anonymous patients of the Republican Narcologic Center and detained clients of enforcement agencies. In addition, possible participants were searched and recruited through the chains of friends and acquaintances who might know IDU.

As personal relations and rapport with IDU were established they were asked to refer other IDU whom they know and who might be interested in participating in this study. The procedure for

selecting participants was adapted to the population as encountered. When self-reported drug use was found among individuals recruited through one person, sampling efforts were increased around that person. Complete anonymity and confidentiality of information obtained were assured to all approached.

In total, from June to September 1999 37 potential participants were approached through multiple chains of referral, from which a sample of 22 IDU were recruited. The inclusion criteria for study participants selection were 1) being an injecting drug user (regardless of current injecting status) and 2) being in Yerevan for at least 6 months before the interview (since several IDU not included in the sample were absent from Yerevan for even one month before the interview and, therefore, possess no injecting behaviors' patterns inherent for Yerevan IDU).

Difficulties encountered during recruitment could be explained by the following:

- 1) Injecting drug use is a covert activity in Armenian society and individuals who inject drugs do not tend to isolate themselves;
- 2) Social networks of IDU do not exceed more than 3-5 persons and could not be easily accessed;
- 3) Open, public places are rarely used for injections;
- 4) IDU are hard to reach and are hidden since criminal and administrative penalties for individual possession and/or use of illicit drugs are very strict.

Despite recruitment difficulties, a heterogeneous composition of participants was achieved due to use of multiple snowball sampling. The final sample is reasonably representative of different subpopulations of IDU in Yerevan based on their preferred patterns of drug use, socio-demographic characteristics, risk perceptions and other lifestyle peculiarities (Appendix 7).

2.3. Data Collection Instruments

In-depth Ethnographic Interview

A total of 22 ethnographic interviews were conducted during the period from June 9 to September 12, 1999 in Yerevan among intravenous drug users. The population of drug users was chosen to explore direct patterns of drug use and other specific behavior practices in greater depth. All potential participants were informed about the purpose and procedures of the study. Voluntary and anonymous basis of participation in the study was guaranteed to all potential participants. Written informed consent was obtained from all interviewees (Appendix 1). An ethnographic interview disclosure statement and field guide were developed to conduct in-depth interviews with participants (Appendix 2). The interview guide included general domains of topics to be covered during the interview: warm-up questions to build rapport with an interviewee, questions related to the history of drug injection initiation, current injecting and sexual practices, personal risk perception issues, health care and information seeking behavior, and financial characteristics.

Wording and sequence of key questions and probes to be included in the field guide were pretested during four pilot ethnographic interviews. Following pretest interviews, an initial guide was

revised, some non-understandable questions were eliminated, and more detailed probes were included.

In addition to in-depth interviews, an anonymous self-administered questionnaire was given to all participants at the end of the in-depth interview to obtain socio-demographic characteristics of the panel. Questions regarding demographic information included gender, age, place of birth and place of residence, type of house they live in, education level, employment status, marital status, sexual orientation, number of persons they live with, and financial issues (Appendix 3). The demographic questionnaire also was pretested and revised.

Unique identification numbers assigned to each interviewee were used to match in-depth interview responses with demographic questionnaire.

All interviews were conducted face-to-face with a respondent, in a private room. The interviews lasted about one hour. The major part of interviews were conducted in Armenian, and 5 interviews were conducted in Russian (field guide and demographic questionnaire in Russian were prepared in advance).

Extensive notes were made either during an interview or immediately after an interview (in cases when an interviewee did not feel comfortable with note-taking during the interview). Field notes were expanded after each interview. Detailed interview reports were translated in English.

Key informant Interview

In a qualitative research key informants are considered an important source of information. Key informants are people who are particularly knowledgeable about the topic under investigation, whose insights and experience can be useful in understanding and explanation of research findings⁴⁷.

In this study two key informants were chosen to obtain insight and understanding of injecting patterns in Yerevan: Deputy Director of Republican Narcologic Center of the Ministry of Health and Deputy Head of Department on Combat Against Illicit Drug Trafficking of the Ministry of Interior Affairs.

Preliminary contacts and meeting arrangements with key informants were made by phone. They were informed about the topic of investigation and their role in this study. Written informed consent was solicited (Appendix 4).

Key informant interviews were conducted on August 9 and August 11, 1999 in Yerevan. A key informant interview guide was developed in accordance with the in-depth interview guide to have similar topics investigated from different points of view. Main topics to be covered during a key informant interviews included general information about the activities of organization the key informant work in, socio-demographic and health characteristics of injecting drug users, causes of injecting drug initiation, possible barriers to treatment seeking, awareness and risk perception issues, and possible ways of solution (Appendix 5).

Interview with key informants took place in their offices, in private. Each interview lasted about two hours. Interviews were conducted in Armenian and then translated into English. The note-taking approach was applied to keep information obtained. Field notes were expanded and transcribed immediately after the each interview.

2.4. Data Analysis

Expanded field notes of both in-depth ethnographic interviews and key informant interviews were translated into word-processing format and were imported to the ATLAS/ti software package for analysis of qualitative data. Initially there was made preliminary analysis to look for general themes that come up throughout the data collected. Then, based on these preliminary themes a more detailed coding system (Appendix 6) was applied to identify main domains of questions to be answered by the research.

3. RESULTS

This section presents results separately for the data collected from key informant interviews and in-depth ethnographic interviews with intravenous drug users. Direct quotes from the interviews are included to reflect specificity of answers and are presented in shaded boxes.

3.1. Key Informant Interviews

Interviews with two key informants, namely with the Deputy Director of Republican Narcologic Center of the Ministry of Health and the Deputy Head of Department on Combat Against Illicit Drug Trafficking of the Ministry of Interior Affairs, provided information regarding risk factors contributing to HIV infection in IDU and main predictors of intravenous drug use as well. The results of the key informant interviews are presented in terms of the most significant domains of the research questions including 1) work problems, 2) general information on IDU in Yerevan, 3) causes of initiation of injecting drug use, 4) attitudes toward IDU, 5) barriers for IDU in seeking care and treatment, 6) awareness of HIV/AIDS and risk perception, 7) sources of information on HIV/AIDS, and 8) suggestions for IDU life and social conditions' improvement. Key informants are referred to assigned numbers to maintain confidentiality.

3.1.1. Work Problems

Problems encountered by informants during their everyday work ranged from the usual current financial difficulties to more specific professional problems inherent in non-medical drugs' transportation, acquisition and use. While the representative of the enforcement agency was mostly concerned with illicit drug trafficking issues, the physician's anxiety was more related to the problems with IDU themselves and their treatment for drug dependency:

“The network of drug dealers increases day in and day out, and illicit drug trafficking is widespread. Although we control the entrance of any type of drug in Armenia, however, it is impossible to check everything. There are 200-250 tracks entering in Armenia per day. About 8-10 hours is necessary to check each of those tracks. So, despite all of our efforts drugs enter in Armenia. You know how many interesting and, even, amazing ways of drugs import exist. For example, people keep drugs in the rectum, or they put drugs in condom and swallow it. So, we have a lot of things to do. This is our job”.

KI#1

“Oh, we have a lot of problems. Nowadays, we have no patients in our Center. This is, first of all, due to migration of active, hard-drug abusers out of Armenia. Also, they are afraid of seeking treatment since their names should be registered and informed to police. In addition, we have a lot of problems concerning financial issues. Today we do not have enough supply of medications to provide treatment. Many drugs I find myself in order to treat them. These medicines are very effective; they really treat drug dependency. However, more time and medications are necessary to be able to effectively treat our patients”.

KI#2

3.1.2. General Information on IDU in Yerevan

Age group involved

Both key informants mentioned that intravenous drug use involves people from 18 to 28 years of age. Age group from 29 to 39 years were reported to be the second age group affected by the intravenous drug use. Informants emphasised the concerning trend in the recent marked increase in the number of young drug abusers:

“Things are changed now. In the past the mean age of our patients was 25 years, now drug addiction is more prevalent among younger groups... Youth are involved in intravenous drug usage from 18 years of age”.

KI#2

Gender differences

With regards to gender differences, drug use was mentioned by both key informants to be the most prevalent among males. Females are traditionally viewed to be more passive; they are less involved and are less active in making bargains regarding acquisition and transportation of drugs. However, both informants were consistent in stressing the increase in the use of non-injecting drugs among females. Ecstasy pills were mentioned to be the most widespread. Girls consider ecstasy to be “cool” and use them to look fashionable.

Socio-economic status

There was universal agreement between both informants that currently representatives of all social levels are involved in drug abuse. However, opinions diverged regarding the most affected by drugs social group. As one of the key informants mentioned, the majority of drug abusers are those who have no constant source of income. In contrast, the second key informant considered more financially secured people to be the most involved in the drug use. In addition, schoolchildren and students were reported to constitute a considerable part of drug abusers either injecting or non-injecting.

General health, health problems, and health services utilized

In general, intravenous drug users were mentioned to have various health problems. Constant complaints of liver pain were noted to be major symptoms of intravenous drug users. In addition, nervous system disorders were consistently mentioned by both key informants to be widespread among intravenous drug users. Brain impairments due to drug use also leave their traces on drug abusers; and they start to consume alcohol heavily.

“All of them have liver pathologies...Also they [intravenous drug users] have complaints of heart; cardiomyopathy that are common among them...Gastritis is also very common...The big problem among IDU is alcoholism. I have many patients who were treated for drug dependency, but their brains were already damaged and they were in need of “something else” to suppress their thirst of drugs. ...For former IDU alcoholism is a big problem since it develops faster in IDU, than in a previously healthy individual ”.

KI#2

3.1.3. Causes of Initiation of Injecting Drug Use

Several reasons and factors were mentioned by both key informants as playing a major role in the initiation of injecting drug use. Main reasons behind the decision to start injecting drug use were thought to be the following:

- *Opening of borders*

The transition to a market economy and opening of borders was mentioned to be the important factor for injecting initiation. Armenia being a transit country between the East and the West was mentioned to be a convenient location for illicit drug trafficking through his territory whit the parts of those drugs remaining in Armenia.

- *Bad living conditions and unemployment*

Both respondents were consistent in stressing low socio-economic conditions, and difficulties of everyday life as the cause of drug injection initiation:

“They want to forget their conditions: social, everyday life. It is [drug use] like doping which help them [IDU] to solve existing problems themselves... People seek ways to get rid of the oppressing reality ”.

KI#1

Unemployment affects not only economic conditions of people but also their psychology. As it was noted, when people have nothing to do, they start to inject drugs to fill “gaps”, e.g. the meaninglessness of life.

- *Russia as a source of Armenian drug users*

Both key informants were strongly consistent in emphasizing that recent migration to Russia where drug trafficking is more widespread and drugs could be found everywhere has had it drawbacks. Children of many parents who left for Russia and other Republics of the Former Soviet Union in search of work and good living conditions have undergone a “bad” influence from their

Russian peers. It was mentioned, that many Armenian boys and girls that were in Russia in early adolescence (a period of self-realization and self-confirmation) started to inject drugs to show that they are strong, and they are “good boys”. In addition, many adolescents view injecting drug use as a prestigious thing, which distinguishes them from others.

“You know, bad examples of self-realization are accepted easier than good ones. Many children started to inject drugs out of Armenia and by the time being home they are about 20-25 years old and are already drug abusers, and HIV infected as well as ”.

KI#2

“They are mainly those whose parents migrated to Russia or Europe to earn money. They saw that there are all these “modern” things, now they returned and spread that “evil” among their “not so developed” peers”.

KI#1

- *Source of income, business*

According to the informants, many people especially young ones become victims of current drug abusers or drug-dealers who want to involve more and more new clients either for the purpose of making money or for intentionally harming them. A well noticed tendency involving children of rich parents as the most potential sources of income in injecting drug use was also reported by both key informants:

“There are statistics according to which each existing injecting drug users could “create” from 8 to 10 new drug abusers. You know, these people are like patients with TB, they are very jealous: “If I am drug abuser, why should not another one be dependent on drugs? Am I worse than he/she?”

KI#2

“...At first they [rich parents’ children] are provided drugs for free, then as soon as drug dependency develops [dealers] started to pull money from their parents’ pockets”.

KI#1

- *Pleasure*

There was an opinion mentioned, that many people especially well off ones start injecting drug use just for their pleasure, to distinguish themselves from others.

- *False “authorities”*

One of the informants mentioned former prisoners as a cause of injecting drug use initiation. These people are considered as so-called “criminal authorities” in their neighbourhoods. Former prisoners usually tried drug injections in prison. The opinion expressed by the informant was that neighbourhood guys start to inject drugs trying to be closer to the “authority” and to gain his respect.

- *Ground for a crime*

Being under the influence of drugs was mentioned helpful for many criminals to courage to be able to conduct any crime that otherwise would not be done:

“It is a tool to break the factor of fear. Injected drug switches their conscious off and they can perform any murder they would not do in a normal condition”.

KI#1

3.1.4. Attitudes Towards Intravenous Drug Users

Highly polar opinions were expressed by the informants regarding IDU being considered diseased or criminals. While one key informant strongly believed that injecting drug users are ill people and should be treated for their drug dependency, the other key informant insisted that they are criminals and should be arrested. The argument behind this opinion was explained that in order to use drug it needs to be bought or otherwise found. These activities are considered to be criminal according to the 229 clause of the Criminal Code of RA. In addition, drug use was mentioned to be the drawing force for the realization of other more severe crimes and murders.

However, both key informants were remarkably consistent in their attitudes toward young drug users who were considered victims of “more experienced” drug abusers. Provision of necessary information through mass media and a compulsory treatment were suggested as ways to keep away the youth from narcotics. As it was mentioned, prison is not a solution. It will just add new problems by keeping young drug abusers in a criminal environment:

“Drug abusers first of all are ill people. Of course, I agree that drug sale distribution etc. should be punished. But if a young person inject drugs for the first time and he will be incarcerated for that, I am 100% sure that this person will become criminal for the rest of his life; prison will break his life...I think, first-time users should be treated but not arrested. Even, I think, compulsory treatment should be used, since drug users lost their possibility of thinking; their brains work only in one direction: how to find money, how and where to buy a drug, do injection and that is it. Then this chain is repeated again and again. So, these people should be treated”.

KI#2

3.1.5. Barriers for Intravenous Drug Users to Seek Treatment and Care

According to the respondents, there is a noticeable decrease in the amount of patients applying for treatment for drug dependency in recent years:

“In general, I would say that we have now less patients than we had in the past. Three or four years ago we even had no time to serve patients; there were situations when we had 30 patients per day. Now our wards are empty”.

KI#2

There was no universal agreement between the informants concerning barriers for intravenous drug users to seek care or treatment they need. Among barriers mentioned there were:

- *Legal barriers*

Absence of any barriers was noted by one of the respondents:

“I do not think that there are special barriers for them [drug abusers]. It would be interesting for you to know that in the 229 clause of Criminal Code of RA there is a part according to which there is no criminal responsibility for those drug addicts who apply for treatment voluntarily”.

KI#1

However, a voluntary treatment was mentioned to be felt by IDU as a trick, as a way to detain them. In addition, the same 229 clause of the Criminal Code of RA is not so kindly with those drug

abusers who were caught by the police the second time; these people have to be arrested. While the representative of enforcement agencies is quit willing to adopt and follow this legal penalty, physician's perceptions are totally different:

"Fear of being arrested keep IDU away from applying for a treatment. They are afraid to show up and be registered. According to the Law, if the same person will be registered the second time as drug abuser he has to be arrested. We are against this... It is not right to put in prison both a person who uses intravenous drugs for several years and a young person who just tried drugs for the first time. In prison his drug dependency will go deep into more dependent status. It is necessary to treat that person but do not break his life farther "

KI#2

- *Distrust to a treatment*

Interestingly to note, that even the necessity to treat IDU was questioned by one of the respondents. However, surprising consensus was found between both respondents regarding ineffectiveness of methadone therapy used for treatment of IDU worldwide. While one informant spoke of positive aspects of methadone therapy such as patients being under a control of physicians and prevention of HIV and other blood-borne infections, at the same time methadone therapy was not considered as the mean for a treatment:

"I do not think that these people could be treated; show me at least one drug user who was treated. There are a lot of methadone programs world-wide suggesting replacement therapy for addicts; I do not believe in that".

KI#1

"You know, methadone therapy is easy to perform than treatment that we provide. It [methadone therapy] does not eliminate drug dependency, it just moves a patient from dependency on hard narcotics such as heroine, cocaine, morphine etc. to dependency on methadone. Of course, methadone therapy is provided in clinics, patients are under the control of doctors and this helps to overcome some dangerous aspects of drug abuse. In addition, prevention of HIV and blood-borne viruses is realized through such therapy. However, we offer our patients another treatment that completely eliminates drug dependency. You can ask many people who were treated in our Center and they will prove that they are really very well treated and do not inject drugs again".

KI#2

- *Financial barriers*

Among possible barriers to care and treatment one of the informants mentioned the fact that treatment require money and not all IDU can afford it; even the availability of anonymous treatment does not attract them since this service is not free of charge. On the contrary, it was also noted that since IDU are able to find money for drugs they should be able to find money for a treatment as well. However, that approach was not felt to be a solution in any case.

- *Mental and psychological barriers*

Lack of ability to think consciously and mental disorders present in IDU were mentioned to be obstacles in seeking care or treatment. In addition, physiological peculiarities play marked role; many IDU were noticed do not tend to apply for a treatment until they have no serious health problems.

3.1.6. Awareness of HIV/AIDS and Risk Perception

According to both key informants most IDU have rather surface knowledge about HIV/AIDS and how it is transmitted. Awareness of the existence of AIDS problem in general was mentioned to be the most appropriate description of IDU knowledge on this topic. In addition, most IDU were felt being do not concerned with the opportunity to catch HIV and other infections and do nothing to prevent a possible infection.

Among plausible explanations for a low risk perception in intravenous drug users the lack of injected drugs, syringes, means of sterilization as well as poor sanitary conditions in injecting places were pointed out by one of the respondents:

“Its [drugs] unavailability and high cost compel IDU to dissolve 1g of drug, for example, heroin, in one common pot..., and then each of them take his dosage by his own or common syringe. Usually, they inject drugs in a hARRY, in hidden places (basements, for example). At that places there is no possibility for sterilization, and, even, for washing used syringes. Of course, all of this promote the spread of different infections including HIV”.
KI#1

However, more educated and more well off IDU were thought to be more aware of the problem of HIV/AIDS, and more concerned with their own safety:

“On the other tail, there are also people from high social levels who know enough about the possible infections and they, of course, prevent themselves by using single syringes for each injection. For example, if a doctor is drug addict, he will never share needles with others”.
KI#1

3.1.7. Sources of Information

Among the most appropriate sources of information for improvement of IDU’s knowledge on HIV/AIDS and risky behavior perception both key informants mentioned TV, radio, and newspapers with the TV use being the most working mechanism. Informants emphasized on the special attention to be paid to school-based education of children as well as parents’ education. While considering the lectures on healthy life style as important ones, at the same time the respondent stressed on the necessity to train parents to take care of their own children:

“I think education should be started from schools. It is very important to conduct lectures on healthy life style, to teach pupils about harm and consequences of IDU, about dangerous infections including HIV etc. And it is very important to pay attention also to parents’ education. Many parents even do not know that their children inject drugs. Consumption of alcohol is less harmful. It is visible. Parents could view that their children consume alcohol and can take appropriate measures to restrict children’s unhealthy habit. Drug use is hidden and sometimes parents realize that their children are drug abusers when it is already too late”.
KI#2

3.1.8. Suggestions

When asked for suggestions regarding the improvement in health and social conditions of IDU in Yerevan both informants presented separate scenarios for the current situation and for the future; they stressed on things that should be done right now and outlined improvements that could be done only in the future. The vital concern of the informants related to the increase of knowledge of the

youth and their families about intravenous drug use consequences and to the improvement in current IDU's treatment as well:

“Now powerful propaganda is necessary. The stress should be made on families; promotion of healthy life style should begin in families. Usually, parents are unaware of drug issues, but children know it very well. They are young, they do not understand the harm of narcotics and started to use them to show their so called “independence”, modernization. It is necessary to start education programs in schools, as well as to provide a huge flow of information by TV, in newspapers”.

KI#1

As part of the treatment improvements the necessity of changes in the Criminal Code was emphasized. Successful completion of treatment is possible only in cases of the dismissal of criminal charges or the suspension of penal sentences:

“We are now preparing together with the Ministry of Interior Affairs new Order according to which all people using non-medical drugs should be treated during 10 days in our Center if, of course, they need treatment. Only after that, if police will cache them again as drug abusers they should take criminal responsibility. I hope that the new Order will help to solve the problem”.

KI#2

Future suggestions were mostly related to the activities known from the experience of other countries that have faced with the problem of intravenous drug use before Armenia did. Improvement in life conditions in general was viewed by one key informant to be a premise for reducing the illicit drug use in a society. Although there was no consensus between the informants, creation of a Rehabilitation Center for drug abusers was mentioned among other future improvements. While the Rehabilitation Center was not applicable from the point of view of one informant who considered IDU population to be closed one and do not tending to show up itself, the other respondent believed that it is luxury in today's conditions but a necessary luxury. The argument in favor of such a Center was advocated by the necessity to create a supportive environment for the former IDU to keep them away from a temptation to try drugs again and to help them to overcome the psychological dependency on drugs:

“Look, we treat drug abusers during 10 days and then they go out in their old surrounding of drug abusers. And it is very hard for a former drug abuser to stay away from temptation to try drugs again, especially if all his friends are drug abusers. He will refuse offered drugs once, twice, but at the third time he will not be able to resist. One of my patients told me that as soon as he met his old friends after treatment he started injections again: “It is in my blood, it is in my brain. I cannot refuse from usage”. That is why existence of Rehabilitation Center is necessary. In this Center drug abusers will take intensive therapy both physical and mental, as well as there will be organized all their daily activities. Moreover, psychological help is the most important part of a treatment. Physical dependency could be overcome easily, whereas treatment of mental dependency is the hardest one”.

KI#2

3.2. In-depth Interviews With Intravenous Drug Users

A total of 22 in-depth interviews were conducted among intravenous drug users in Yerevan. To maintain the anonymity of the respondents each interviewed individual is given an identification number and is referred to by that number. The results of all 22 in-depth interviews are presented in

accordance to the main domains of research questions including 1) socio-demographic characteristics of the respondents, 2) general health, health problems, and health services utilised, 3) typical day, 4) causes and conditions of injecting drug use initiation, 5) current injecting practices, 6) awareness of HIV/AIDS and health seeking behavior, 7) barriers to treatment and care, 8) information/training willing to receive and its sources, and 9) suggestions for improvement IDU life and conditions. IDU are referred to by numbers to keep confidentiality.

3.2.1. Socio-Demographic Characteristics of the Respondents

Table 2 (Appendix 7) summarizes socio-demographic characteristics of the interviewees in terms of their age, education, occupation, employment status, marital status, sexual orientation, and sources of income. As it can be seen from the Table 2, socio-economic and demographic background of the respondents are varied markedly. All respondents were males between 20-41 years of age with the mean age of 30.8 years. The majority of the respondents were residents of Yerevan. Five out of 22 resided in other cities and villages of Armenia, and 2 respondents resided in the cities of Russia. Most respondents lived in apartments. Only few of them lived in private houses, and only 1 out of 22 rented an apartment. None of the respondents but one lived alone. Number of family members or people with whom 21 respondents live was ranged from 2 to 6. Equal number of the respondents (10) were either married or single. Only 2 of 22 were divorced. All respondents were heterosexuals.

Education background of this sample of intravenous drug users was considerably different. The majority of the respondents have completed 10 years of school education. One-third of the respondents (8) mentioned being involved in the University education. However, not all of them completed their higher education. Specialized secondary education (College education up to 12 years) has been completed by 4 respondents.

Despite this wide diversity in the educational level, most respondents were whether unemployed or worked whenever find a job. Employment by private organization was mentioned by 5 interviewees. Those with both complete and incomplete University education (4/22) reported being involved in a trade or being self-employed; they work whenever find a job. Only 1 respondent with University degree mentioned being employed by a governmental organization.

Information on occupational status was not available for the majority of the respondents. From a total of 9 respondents whose occupational status was reported, 2 were trained as economists, 1 was a geologist, the other 2 were a builder and an autoconstructor, 2 were engineers, 1 was a driver, and 1 was a specialist on goods.

Majority of the respondents reported help of relatives as a main source of income in the preceding the interview month. Amount of money provided by relatives fluctuated from US \$50 to \$500¹. Salary was second frequently mentioned by the respondents source of income. More than one-

¹ Excludes missing data (n=5)

third of the respondents reported receiving a salary ranged from US \$5 to \$800². Help of friends and temporary work were also reported among sources of income in the month preceding the interview.

3.2.2. General Health, Health Problems, and Health Services Utilized

Majority of the respondents reported a variety of problems ranging from just bad feeling, fatigue, and being tired to serious problems with liver and other organs. Fifteen out of twenty-two interviewees described their general health being normal. When asked about health problems present 6 out of 22 respondents mentioned fatigue, being weak and becoming tired very quickly. However, these problems were noticed do not restrict their daily activities but just “creating some inconvenience”. Only one out 22 mentioned that he cannot stand on feet for a long time since he is very weak and becomes tired easily. Two out of twenty-two mentioned depression as a constant problem present. Another 3 respondents complained on pain in liver area. One out of 22 mentioned problems with gastrointestinal tract and conjunctivitis bothering him. One of those with constant liver problems was told to have spleen enlargement, too.

Despite these seemingly good health conditions, most respondents reported having a history of different diseases including STD, TB, Hepatitis, and herpes. Several of the IDU mentioned being tested with Hepatitis B (8/22) and Hepatitis C (6/22) with 3 of them having both. Interestingly to note, that 8 out of those being tested to have either hepatitis B or Hepatitis C, or both were diagnosed in different cities of Russia. 3 respondents had herpes simplex infection, however, all of them did not apply to a doctor: “just simple herpes, it is not serious”. One IDU reported having TB. Nine respondents reported to be HIV positive. Only 4 out of 22 respondents mentioned having no problems with health and no history of any diseases.

3.2.3. Typical Day

The overwhelming majority of the respondents spend their day just doing nothing special. This situation is explained by the current socio-economic conditions and unavailability of job in Armenia and does not depend on respondents’ willingness to work. Few respondents mentioned being involved in some business, usually a trade whenever they find a job. Only 4 out of 22 IDU mentioned having constant work and spending their day at a workplace. One respondent was compelled to spend his day at home due to health problems.

“In Moscow I had a job, here I cannot find a job. Here I have nothing to do... I just spend my time with friends”. IDU#17

“My typical day is similar with that of others in this country; I am unemployed. If there is any job available, I am at that job. If not, I am either at home or outside”. IDU#6

“Usually I spend my time around markets trying to sell something to earn some money”. IDU#22

² Excludes missing data (n=2)

3.2.4. Causes and Conditions of Injecting Drug Use Initiation

First trial age

Respondents started to inject drugs between the ages of either 17-22 or 28-35. There were no IDU who injected drugs for the first time before 17 years of age. However, considerable part of the respondents used non-injecting drugs at much earlier ages of 13-17. Many respondents started to inject drugs in young ages when they moved to Russia with their parents. One respondent reported that he started to inject drugs in prison.

“It was when I was 23 years old. My friends offered me a drug in a ready made syringe to try.”

IDU#21

“I have started to use drugs when I was 19 years old... At first I did not inject drugs. I just smelled cocaine, heroin... Then I moved to injections...”

IDU#19

“The last 5 years I lived in Moscow. I started to inject drugs there, when I was 29 years old.”

IDU#6

Types of drugs started with

Majority of the respondents before the use of injecting drugs used non-injecting ones, particularly, cannabis and, in less extent, marijuana. About one-third of the respondents mentioned gradual shift from non-injecting drugs to light injecting drugs and then to more hard injecting drugs. For example, cannabis - promidol/demidrol – morphine – heroin pathway with some variations was mentioned by several respondents. However, most respondents started to use drugs with heavier ones including poppy, chernjashka [the mixture of several drugs], cocaine, and heroin with 6 of them starting directly with heroin injections. This trend was noticed among more younger respondents and those left for Russia in their adolescence period. One respondent even did not know the type of drug started with since he was offered that in a ready made syringe by the friends:

“I don’t remember exactly... I have tried poppy, then cocaine, then heroin. Before injections I tried “plan” [cannabis]”.

IDU#10

“I tried to inject drugs in 1995. It was morphine, then I also tried heroin. Before starting injections I have smoked “plan” several times”.

IDU#8

“I started injections with promidol. Before injections I smoked plan. Then after promidol I moved to morphine. During last five years I inject heroin”.

IDU#12

“At first I did not inject drugs. I just smelled cocaine, heroin. And after that I moved to injections of heroin”.

IDU#19

“The last 8 years I lived in Moscow. We moved there with my parents. I started inject drugs 4 years ago, when I was 20 years old. I started immediately with heroin. It is available in Moscow at any corner”.

IDU#16

First trial place and occasion

Most respondents tried drugs for the first time in a company of their friends, schoolmates or acquaintances, in their neighbourhoods or during parties. Ten out of twenty-two respondents initiated

their drug injecting practices being outside of Armenia, in different sites of the Russian Federation and Ukraine. One respondent started injections in prison. Friends or other initiators who were in most cases drug users offered almost all respondents to try a drug for the first time. Fewer IDU were pushed to start injections by dealers, people who sell drugs for a profit.

First trial reasons

Main reasons behind the decision to initiate injecting drug use were:

- *"Company effect" influence*

Most respondents started to inject drugs under the influence of others; they were offered drugs in a company of their friends, neighbors, and acquaintances or they initiated injections themselves to be "an accepted members of a company". Interestingly to note that none but one of the respondents blamed others in pushing them to start injections. Only few respondents recognized that they were "put on a needle"; they were provided first one-two shots for free, in a ready-made syringe. It is after a while they had to pay for drugs:

"Once we have gathered with my friends and there were guys who have offered us a drug in a ready made syringe to try. Two days later we decided to try injections again. We went to those guys and asked for a new dose. They said that it costs money; and each of us provided some amount of money to buy a drug. That condition lasts for 10 days. And I became a drug addict. I had terrible pains all around my body; I had headaches, bone pain, etc. I went to a drugstore to buy usual drugs, i.e. aspirin, analgin. On the way from a drugstore I met one of my friends and he asked me what have happened with me. I said that I am probably ill. And my friend explained me that it is not a sickness, it is "lomka" [physical dependency on drug]. So, I started to do injections regularly".

IDU#22

- *"Just to try" reason*

Ten out of twenty-two IDU reported that they started their first injection in order to just try and know what injecting drug is. A decision "just try a drug" was also influenced by the surrounding:

"I was with guys from our neighborhood. They decided to inject drugs and I decided to try too".

IDU#15

"...Just decided to try an injection. I was told that it is more stronger and its effect is longer than that of non-injecting ones".

IDU#3

- *"Gain a respect" reason*

A desire to gain a respect of peers and older "authorities" was also mentioned by the respondents when they were asked about the reasons for injecting drug initiation:

"Neighborhood guys who were more older and were using drugs for several years offered me and I decided to try. You know, at that time I was thinking that by using drugs I would be more respected by older guys; it was necessary for my self-esteem. You know, at first I was thinking that I was just naughty and at any moment I will be able to quit drugs. However, drug dependency was developed soon and I was not able to refuse from drugs".

IDU#12

- *“Pleasure” reason*

Few respondents reported a shift from non-injecting drugs to injecting ones in order to get more pleasure.

3.2.5. Current Injecting Practices

In general, the respondents were more reluctant to speak about their current use of drugs than about the first use practices. Changes in the current injecting practices were mostly related either with high cost and low accessibility to heroin in Yerevan or with the discovering own HIV positive status. Both factors were seemed to restrict the respondents’ current injecting practices. The compelled shift from heroin and other hard narcotics to more light ones (both injecting and non-injecting) was noticed among those IDU who returned home from Moscow and other cities of Russia and Ukraine. However, majority of the respondents reported that they continue to inject drugs either time to time or as usual, and the most frequently used drug was mentioned to be a heroin:

“Now in Armenia heroin is very difficult to find. I was trying to find it but it was not possible. I had an opportunity to bring heroin with me from Moscow, but did not do it. However, it is not difficult to pass drugs through borders. There was no luggage review when I crossed Russian, Georgian and Armenian borders. It is very easy to bring drugs in Armenia through other countries. I was trying to find anasha [a non-injecting drug that is smoked] here, and, again, my attempts were unsuccessful”.

IDU#16

Reasons for current use

Most respondents were not able to mention any rational behind the reason for the drug use; they inject drugs since they developed a drug dependency. One respondent mentioned that injections of heroin help for depression. More young respondents reported that they use drugs for pleasure and for getting relaxed. One of them emphasized that drugs keep him strong and help to work:

“I was with my friends, there was a party and I was offered a drug for injection. I tried it, it was OK and I started to inject drugs and continue it for already 10 years”.

IDU#2

“I do not consider myself drug addict. I do injections time to time for my pleasure. I just want to be relaxed... I like it; it is cool...”.

IDU#14

Injection environment

All respondents inject drugs in a company of 2–4 friends or acquaintances. Majority of the respondents usually share a cost of "a dose" being injected and take equal responsibilities in finding a place for injection, drugs and other injecting paraphernalia with their "colleagues". Those who experienced their injecting drug use mostly outside of Armenia acquired there ready-mead pre-dosed drugs in syringes from dialers/traiders or pushers. Returning home they encountered difficulties in both finding a "ready and pure" drug (mostly heroin) and buying them (in Yerevan drugs are about 5-6 times expensive than, for example, in Moscow). In Yerevan the drug market is less developed than in other cities, and most often the drugs are made by the drug users themselves. None of the respondents who reported a preparing of the "dose" by themselves kept safety rules; drugs were boiled

in a communal pan and were poured into a syringe which, in most cases, was also common for all “recipients”. Almost all respondents inject drugs at home so as to bring together all ingredients and to cook “a dosage” in a communal pot. In addition, they were afraid of being caught and detained by the police. Only few respondents reported that they sometimes do injections openly, in public places (streets, clubs, and parks).

Type of drug injecting currently

Almost all respondents use only one type of drug with the use of heroin being prevalent among older respondents. Despite the fact, that younger respondents mentioned promidol, morphine, and poppy as drugs injected currently, a movement towards heroin was noticed also among them. Although the majority of the respondents tried several drugs, however, few of them use simultaneously more than one drug; they gradually moved from one (usually lighter) type of drug to another.

Frequency and dosage of injections

Almost all respondents increased gradually both the frequency and the dosage of injections during their drug-using history; they started with 1-2 times per month or week with very small doses and step-by-step moved to 3-4 times per day increasing the dose up to 1.5 gr of drug (mostly heroin) per injection. For younger IDU the frequency of injections depended on the frequency of meetings with their drug injecting friends and on the accessibility to drugs. With regards to the dosage, for older respondents there was a tendency do not know the dose of a drug per injection since they shared it with their friends.

Sharing of needles and syringes

All respondents feel negative about sharing a syringe with other people. Majority of the respondents reported that they at least tried to use only their own syringes. However, almost all respondents were in situations when one syringe was used by a number of people. Most often the respondents share their needles with close friends. Even in the cases when the respondents used their own syringes they reported a use of a communal pot when making the drug together. Few respondents (both younger and older) mentioned that they almost always shared needles and syringes with friends or other people with whom they were in a company at that moment. One respondent reported sharing of syringes in prison where was a shortage of new and clean needles and syringes:

“...usually I share one syringe with my friends. We prepare a dosage in one syringe and do injections with that one syringe”. IDU#5

“I have my own syringes and try not to use the same syringe with others. But sometimes it happens that in a company there are 5-6 people and there is only one syringe available. So all do injections with that syringe”. IDU#13

“Usually it is impossible not to share needles and syringes with others since sometimes you are in hurry and do not think about anything but injection. Sometimes you need to do injection when there is no clean needles and syringes available. At that time you do not think about a danger...”. IDU#10

Cleaning of used needles and syringes

Despite the fact that all respondents faced with the necessity to use repeatedly their own syringe or to share one syringe with several people, almost all respondents did not disinfect used syringes. None of the younger respondents and few older respondents reported time to time washing of used syringes with warm or cold water. However, many respondents stressed impossibility to clean a syringe after each injection when they use a ready-made syringe; there is still the dose remained in a syringe. One respondent reported that he does not clean a syringe after his friends since it will show his disregard towards “colleagues”.

Attitudes towards the use of drugs

The majority of the respondents had negative attitude towards the use of drugs and their addiction. Most IDU were willing to quit injections, however, it is very difficult for them due to physical and, mostly, psychological dependency on drugs they developed. Older respondents stressed on consequences they have as a result of their addiction including loss of families, jobs, impossibility to have children, and absence of a meaning in the life. Only few respondents (regardless of age) reflected positive to the drug use considering it as a doping and a tool for getting relaxed.

“Oh, it is a hell. I will never ever do that again. Actually, I had nice grocery, full of products. For those last two months only a few products remained; I sold everything to buy drugs. It [drugs] destroyed everything that I created during all my life. I even could loose my family. Oh, it is a crime, it is a hell, it is a danger. It kills a family, the whole life. I have 2 sons and I will "kill" them if will discover that they inject drugs. One should even does not start inject drugs. Never”.

IDU#18

3.2.6. Awareness of HV/AIDS and Health Seeking Behavior

Most respondents had rather surface knowledge about HIV/AIDS and how it is transmitted. Although majority of the respondents reported that they know how is HIV spread and brought correct examples, however, they are seemed to have mostly a hypothetical idea about it since they do not apply their knowledge practically. Older IDU were more aware of HIV/AIDS and tried to keep safety rules, whereas younger respondents despite their reported knowledge were less worried about and did not consider HIV/AIDS as a real danger for them:

“I know that I can be infected by various infections, and, in recent time, by AIDS. But I do not think that in my surrounding there is somebody who is HIV positive... and I try to use my own syringes”.

IDU#13

“Yes, of course, I knew about AIDS. It is possible to get HIV through sexual contacts and injecting by dirty syringe. But I was thinking that it will not touch me”.

IDU#16

Applying for HIV testing

An overwhelming majority of the respondents have not applied or was not willing to apply for the HIV testing mostly due to fear of discovering own HIV status. In addition, the interviewees believed that in an absence of any health problems there is no necessity to apply for the testing. Nine

respondents out of the panel of twenty-two reported that they are HIV positive. All of them were tested for HIV infection when they have applied to health care facilities for other than HIV-related problems. Two out of nine HIV positive respondents were detected in prison.

“I was in prison in Moscow for several months [was incarcerated when was buying drugs from drug markets in Moscow] and I think that they infected me in prison; they did me injection (I don't know what kind of injection) with a dirty needle. They injected many prisoners by that one syringe.

IDU#1

“I had liver pain and have applied at the hospital in Syrgyt [Russia]. There along with Hepatitis B and Hepatitis C I was also diagnosed to have HIV infection”.

IDU#9

Only two young respondents have applied for HIV testing purposively. When asked about the reasons associated with seeking HIV testing, having unprotected sex and sharing of syringes were mentioned by one of them. The second respondent have applied for the HIV testing since his friends with whom he did injections decided to be tested. With regards to factors that might cause them to plan to be tested, the respondents were very reluctant; they would prefer do not know own HIV status. Only one young respondent noted that would probably go to the HIV testing if will decide to marry.

Changes in injecting behavior since hearing about HIV/AIDS

In general, younger respondents changed or, at least, were more willing to change their injecting behavior when faced with a presence of HIV/AIDS problem than older respondents. Among changes undergone there were mentioned reduction in the frequency of injections, needle and syringe sharing stopping, and injection cessation attempts. Only few respondents did and do nothing to prevent them from possible infection mostly due to baseless confidence that “HIV will not touch them” or since they “remember about safety at the very end, when it is already late”.

Changes in sexual behavior since hearing about HIV/AIDS

Majority of the respondents reported that they do not have a permanent sex partner primarily due to their decreased desire to have a sex. Older respondents [long-term drug users] prefer injections to having a sex. Having IDU as a sex partner was more relevant to the young respondents and primarily those who were engaged in their sexual and injecting practices outside of Armenia.

With regards to the use of condoms during sexual intercourse, the respondents almost never used condoms with their primary partners and used them irregularly with casual partners. Younger respondents changed sex partners more frequently than older ones who, in addition, were less willing to discuss such subjects.

“I can always control myself. I think, that sometimes in order to feel myself satisfied, it is better to inject drugs, than have a sex”.

IDU#14

“...No, my wife never used drugs. As soon as she discovered that I inject drugs she decided to be divorced. She said: “Either we [family] or drugs”. No, no”.

IDU#18

“I have sexual contacts very rare. Before that, I used condoms with partners only sometimes. I don't remember exactly”.

IDU#3

Risky Behavior Perception

Majority of the respondents do not perceive themselves at a risk of HIV acquisition. As it was already mentioned, despite the fact that almost all respondents believed that a syringe should not be shared during injections and a condom should be used for each sexual intercourse, their factual behavior does not always match with their statements. The risk of getting HIV infection is mostly perceived indifferently and abstractly. Although the problem of HIV/AIDS is persisting, it is far enough from them since a danger of their risky behavior is suppressed by their addiction.

“Yes, I know that I could be infected with AIDS and other viruses. But at the moment when you see a drug you do not think about possible infection. It is after injection, when the influence of drug is over you think: “Oh, how awful thing did you do”. At that time you realize that could be infected, but at the moment of injection you think about nothing. Sometimes, it happened, that we were out of city with my friends, and somebody showed drugs: “Would you like to try?”. And we cooked a dosage in whatever thing it was possible to do, and injected drug by one syringe that was found. Such things happened too”.

IDU#12

“You know, I realize that it is possible for me to get HIV, but at the moment when you inject drugs you do not think about it. There is some courage present at that time, when you think that everything does not matter, and you don't pay attention to anything”.

IDU#21

3.2.7. Barriers to Treatment and Care

Almost universal agreement was found among the respondents with regards to possible obstacles to take care of their addiction and to receive a treatment. Only one respondent reported existence of no problems or obstacles to receiving a care in a case of need. The following barriers were mentioned consistently by the overwhelming majority of the respondents (in order of frequency):

- *Psychological dependency on drugs*

Most respondents were willing to receive a treatment and get rid of their drug addiction, however, it is very hard for them to overcome a psychological dependency on drugs they developed. The older respondents believe that it is necessary to realize by own mind and to have a power of will to be able to quit the use of drugs.

“Barriers... I decided several times to quit injections. I heard that in Bishcek, Uzbekistan, there is a specialist who treats for drug dependency. I applied to him. The basis of his treatment is hypnosis. And, you know, it really helped. I did not inject drugs for about one year. However, as I met my friends, they offered me a drug to try, and I “sit on a needle” again. My head is full of dreams about drugs all the time. Sometimes, in order to do not think about drugs, I use alcohol. Sometimes I drink a lot. I think that I will not be able to quit this. It is very hard to refuse from drugs when offered. Once tried you cannot quit. Recently, I tried to suppress the thirst of drugs by alcohol”.

IDU#13

“I do not know. It is already a part of me, and it is my nature. When I need a drug I could think about nothing but to find a drug. I always see the same dream that I am trying to do injection but never do it; I cannot do a shot. And I wake up with a sweat. And it is terrible”.

IDU#22

- *Distrust to a treatment*

For many respondents an idea of a treatment for the drug abuse is very questionable. Many of them were treated for their addiction both in Yerevan and outside of Armenia, however, they did not get rid of it. Again, they were not able to overcome the psychological dependency on drugs.

“You know, I was treated for drug dependency for 5 times (both here and in Moscow); pills, hypnosis. But it did not help... You have to understand it [quit drugs] by yourself. It [a treatment] will not help you until you will understand it by your head, by your brain”.

IDU#16

- *Legal barriers*

A fear of being incarcerated kept younger respondents away from applying to a treatment they need. They viewed the existence of the anonymous service in the Narcologic Center as a partial solution since, otherwise, physicians have to inform the police. Only two older respondents shared this fear of incarceration with the younger respondents. This could be mostly explained by the fact that 8 out of 15 older respondents were already put in a prison (both in Yerevan and outside of Armenia) for the use and/or acquisition of drugs. None of the young respondents reported to be incarcerated.

- *Deny of the treatment necessity*

One-third of the older respondents denied the necessity of a treatment since they do not consider themselves drug abusers. They believed that they do not need any medical help and are able to quit injections whenever they want.

3.2.8. Information/Training Willing to Receive and its Sources

General attitudes about receiving information on HIV/AIDS and other diseases were mixed among the respondents and included two poles of opinions from deny of any information to receiving very specific and detailed information. Half of the respondents (both younger and older) believed that they know any risks that each of their behaviors can impose on health and there could be nothing new for them. In addition, it was emphasized that drug addiction phenomenon does not depend on knowledge; it is difficult to follow healthy life style behaviors when "you sit on a needle". On the contrary, more than one-third of the respondents, despite the fact of knowing general issues, were willing to receive more detailed information including all possible issues concerning danger of injections, all aspects on how HIV is transmitted, what should be done to get free of the drug dependency, new treatment methods, dangers of oral sex, and information on STDs. One respondent mentioned that he does not need any information but just a communication with a person who will understand and help him.

Most respondents also believed that the youth should be informed about drug addiction, its danger and consequences in order to prevent them from possible mistakes.

Concerning the sources of and places where that information could be obtained, the IDU mentioned mass media, especially TV, radio, and newspapers. However, some respondents were concerned that the topic is too sensitive to be presented through mass media and more private sources of information, such as brochures, bars, and special places for meeting, were preferred. Two respondents, however, did not like an idea of a special Center for drug abusers emphasizing that people who use drugs prefer to be isolated.

3.2.9. Suggestions

In general, the respondents were very passive while answering this question. Eight respondents gave no meaningful answers. Majority of the older respondents with long term history of drug use were confident that it is better to do not start injections at all than find out ways for improvement of dependency status. Among possible solutions an availability of free and anonymous treatment for IDU was suggested by several respondents. The necessity to discuss this problem more openly, to view drug abuse as a disease and to treat it accordingly, and to eliminate the influence of enforcement agencies in this sphere was also discussed.

"I will suggest young to do not start to inject drugs at all. Usually everybody thinks that he will just try drugs. But it becomes difficult to stop after several injections. It is very difficult to realize the thin edge between just a trying and developing a dependency. And it is very hard to stop".

IDU#12

DISCUSSION

This study presents results of the qualitative investigation of patterns of injecting drug use contributing to HIV infection in IDU in Yerevan. The study was designed to incorporate the findings from in-depth interviews with key informants, people dealing with the problem of substance abuse due to professional responsibilities, and with the intravenous drug users themselves into integrated exploration of injecting drug use peculiarities and general characteristics of IDU in Yerevan.

The data obtained from this study suggest that IDU in Yerevan are seemed to be at risk of HIV acquisition due to their personal, behavioral, social, and drug use characteristics.

Socio-demographic characteristics of the IDU included in this study are mostly relevant with the perceptions of both key informants about the defining characteristics of drug users. The use of multiple snowball sampling provided a desired diversity in the sample demographic profile and social network characteristics. The sample of 22 IDU was composed of males between 20-41 years of age. Majority of the cases (15/22) was classified to be older (over 28 years of age) in comparison with younger respondents (7/22) who were under 28. This age distribution of the panel was somehow discordant with the key informants' perceptions of recent increase in a number of younger drug abusers. Such a discordance could possibly be explained by the fact that most young drug abusers do not reside in Yerevan now; current socioeconomic condition and high unemployment rate stipulated them to search a work outside of Armenia. Absence of women in the panel is correlated with key

informants' prognosis that now in Armenia females are mostly involved in non-injecting drug use practices. In addition, similar studies have shown low rate of female having injecting drug experience⁵⁰.

Various educational backgrounds of the cases supported the statements of both key informants that currently representatives of all social levels are entangled by the drug abuse. However, regardless this diversity in the educational level, majority of the IDU were unemployed and had no constant source of income; financial aid of relatives and temporary work were most commonly mentioned money sources. The current instability and loss of social values could explain this mixture of people from different social levels into one pool of drug users. The data from the literature show that in many countries of the former Soviet Union the prevalence of IDU is stipulated by political instability and poverty^{3, 10, 15, 50}.

When assessing the patterns of injecting drug use contributing to the possibility of HIV acquisition in a sample of IDU included in this study, the following main criteria should be outlined:

- 1) Causes and conditions of injecting drug initiation, types and forms of drug use, social context of drug use etc.
- 2) Awareness of HIV/AIDS
- 3) Medical co-factors of HIV infection in IDU
- 4) Risky behavior perceptions and attitudes
- 5) Actual behavior of IDU

The data from this study showed that majority of IDU started to inject drugs under the influence of their peers/pushers and continue it due to developed addiction. Many respondents started drug injections in their adolescence period when they moved to Russia or other republics of former Soviet Union with their parents. The influence of other countries where drug use is more widespread on "creation" of Armenian drug abusers were consistently mentioned by both key informants and supported by the histories of cases involved in the study. Ten out of twenty-two IDU initiated their drug injection outside of Armenia, and predominantly, in Moscow.

Another concerning trend discovered among the sample respondents was the shift to the use of heroin, the most addictive drug. Although the respondents mentioned gradual shift from lighter non-injecting drugs to light injecting ones and, then, to hard narcotics, younger and "outsider" (who started injections outside of Armenia) IDU reported heroin to be the first injecting drug. Key informants also were concerned with this increase in heroin injections that have been reported to be related to HIV risk-taking behavior^{12,29}.

The data obtained from this study revealed that IDU have rather incomplete and hypothetical knowledge about HIV/AIDS, its ways of transmission, and the means of prevention. Despite the fact, that the majority of the IDU have correctly mentioned that a syringe should not be shared during injections and a condom should be used for each sexual intercourse, their factual behavior does not always coincide with their statements.

Majority of the IDU perceived the problem of HIV as an abstract one that “could touch everybody but not themselves”. These data are correlated with the findings of similar studies undergone in different cities of Ukraine⁵⁰. Low risk perception was found also among 9 IDU who reported to be HIV positive. The probable explanation of this could be the fact that HIV positive IDU viewed themselves as “having nothing to lose” since they have already got HIV.

The presence of medical co-factors accelerating the risk of HIV infection in this sample was also quite concerning. Seven out of nine HIV positive IDU had Hepatitis B, Hepatitis C, or both along with HIV infection, and one had both TB and HIV. With regards to STDs, one of the HIV positive IDU had also chlamidiosis.

In general, health perceptions and a health-seeking behavior seemed to be neglected by the most IDU included in the study. The tendency does not apply for treatment or HIV testing “till I feel myself OK” was noticed among many of them. However, it was shown that a fear of discovering own HIV status kept many IDU away from HIV testing. This seemingly controversially findings could be explained by the fatalism predominant in IDU attitudes toward the HIV/AIDS problem and injecting drug use in general. Development of the psychological dependency on drugs and distrust to the treatment for their addiction were mentioned to be the main barriers hindering IDU to seek care.

Findings of the study suggest that actual behaviors of the sample cases were far from being safe and healthy. Although the IDU, and predominantly, younger ones reported changes in injecting behavior since hearing about HIV/AIDS in a form of reduction of the frequency of injections and needle and syringe sharing, their attempts were inconsistent and selective. Most often they reported a sharing of needles and syringes with their close friends. Even when the use of own syringes was mentioned, the use of a communal pot while preparing a drug was also reported. In addition, cleaning of used needles and syringes was mentioned to be very uncommon. Almost all IDU did not disinfect used syringes.

With regards to the changes in sexual behavior the majority of the drug users were less confident. Condom use with both primary and casual partners was mentioned to be irregular. Analysis of the relevant literature suggests that changes in sexual behavior of IDU has occurred in lesser extent (than those of in injecting behavior)^{30,31} since drug abuse decreases the ability to assess the risk.

In general, IDU have negative feelings toward their drug addiction. They believed that it is necessary to provide the essential information on drug abuse and HIV/AIDS to the youth since “it is better to do not start injections – there is no way out”.

There was no assumption that this group would be statistically representative of the whole universe of injecting drug users in Yerevan since the aim of this study was to explore patterns of injecting drug use in general. While the size of the studied sample is not big, the information gathered represents a wide variety of drug using patterns including injecting use initiation, types of drugs used, form and frequency of drug use, social context of use etc.

As a limitation of the study could be mentioned the use of the snowball sampling for recruitment of the sample of IDU implying that sample was recruited from personal contacts of the 2-3 initial recruits. However, this potential limitation of the snowball sampling was circumvented by the use of multiple snowballs; multiple sources of entry in to the sample were sought to obtain a reasonably representative one. In addition, use of the professional authorities as secondary indicator data sources offered a wealth of information for assessing the consistency of findings and identifying meaningful analytic frames.

Another limitation of the study was the lack of the street outreach work (due to time, manpower, and resource constrains) among IDU that will allow to build rapport with and gain credibility of them, and will help in targeting a number of social networks of IDU.

Also no ascertainment of reported injecting and HIV status of the sample was made. However, actually, confirmation was made while recruiting a sample via secondary people.

CONCLUSIONS and RECOMMENDATIONS

Conclusions

Based on the analysis of the qualitative data obtained in this study, the following preliminary conclusions were made:

- 1) View of the injecting drug use phenomenon as a social and health problem appears to be accepted by institutionalized authorities both in the health and the law enforcement spheres as well as by the intravenous drug users themselves.
- 2) Injecting drug use seems to encompass people of different ages (with the recent trend of involving younger ones), with various socioeconomic and demographic backgrounds. Engagement of adolescents in injecting drug use appears to be connected with the current migration of Armenian population into the countries with the high rates of both drug and HIV epidemics.
- 3) Peer influence and situational and social setting norms come into sight to be possible reasons for injecting drug use initiation among investigated IDU.
- 4) IDU seem unconcerned with health issues and risks inherent in their behavior. There appears to be a misconnection between IDU's knowledge about HIV/AIDS and their both risky behavior perceptions and actual behaviors. Despite the knowledge and, even, availability of injecting equipment, choices about whether to share such an equipment or to use a condom are also influenced by particular "company relationship" dynamics.
- 5) Social and group norms were found to be also important in influencing individuals' perceptions and accounting for the high risk injecting and sexual behaviors.

Recommendations

Based on the analysis of data obtained from the sample of IDU included in this study and the conclusions presented above, the following preliminary recommendations are made for the possible implications of this study:

Intravenous Drug Users

- 1) IDU need to be explicitly targeted to increase researchers' understanding of drug injectors' social environment where risk behavior is actually occurred. Combination of more explicit epidemiological studies of risky behavior with the network-based ethnographic research among IDU is warranted.
- 2) Further research with the employment of social network samples of active drug users is necessary to identify the natural context of drug use profiles, such as needle sharing, sexual relationships, preferences, and habits that might influence HIV acquisition and transmission.
- 3) Further research is also needed to identify gaps in IDU's knowledge and to understand deeply their attitudes and behaviors.

General

- 1) Given the importance of the mass media for information emphasized by the investigated IDU and by the key informants as well, it might be possible to use television and other mass media to increase an awareness of the general population on drug- and HIV-related issues. The potentials for school-based education of adolescents and parents' training via the schools should be tested for further interventions.
- 2) Consistent findings from this study made it possible to consider promoting government officials in launching the changes aiming careful differentiation in criminal and administrative law between individual use and/or possession of small amounts of illicit drugs, and minimizing criminal and administrative penalties for individual possession and/or use.

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APPENDIX 1

CONSENT FORM
IN-DEPTH INTERVIEW WITH INTRAVENOUS DRUG USER

Purpose of the interview

The purpose of this interview is to acquire information concerning health status and behavioral patterns of some groups of population that are different in their characteristics from other groups.

Process

We ask you to participate in this interview in order to learn your experience and attitude towards the topic under investigation. Your opinion is very valuable for us. The interview will last for about an hour. You will be given several questions concerning injecting drug usage.

Risk/Benefit

There will not be any negative consequences for you after participation in this interview. It will give an opportunity to share your opinion about discussing questions.

Confidentiality

Your name will remain anonymous and will not be mentioned with the information you provide. The information received will be summarized in order to understand the problem under investigation. Your participation in this interview is absolutely voluntary. You have right to object the participation in this interview any time you would like.

If you agree to participate in this interview, please write your name below.

Your signature _____

Signature of
Interviewer _____

Date “ ____ ”, _____ 1999

APPENDIX 2

Ethnographic Interview Disclosure Statement and Interview Guide

I. Introduction

Hello, thank you very much that you agreed to participate in this interview. My name is Gayane. I am a student of Public Health Department of the American University of Armenia. I am conducting a study the purpose of which is to explore general health and behavioral patterns of some groups of population in Yerevan that are different in their characteristics from other groups. Your participation is very important and the information that you will provide is very valuable for insight understanding of problems that exist in order to find out possible ways for solution. You are free to express your opinion. I appreciate your honesty. I assure you that all the information you provide will be kept anonymous and confidential and will be used only in summarized form; no names will be attached to any piece of information received.

This interview will take about an hour and I hope you are able to devote as much time. I am going to take notes during the interview in order to not miss any information from you. You are free to not answer to any questions you do not feel comfortable answering.

Can we start now?

II. Warm-up questions

1. For each person his own health has an important role in everyday life. Could you describe your health in general? (*Probes*: health problems present, what kind of problems, how do they restrict your daily activities, if any, what kind of difficulties do you encounter trying to solve health problems)
2. It is usual that people use health services due to different health problems arisen. What about you? Could you describe type of health services you used? (*Probes*: where did you apply to; hospital, physician, etc., history of STD, TB, hepatitis B, etc.)
3. Describe please your typical day. What kind of things do you do during the day, for example today? In average, are those things typical for any day in a week? What is not typical, if any?

III. Reasons for injecting drug use initiation and current injecting practices

4. We all well know that difficult socioeconomic situation in Armenia places different stresses on people. People react differently to those stresses. Intravenous drug use is one of the ways which people might choose to cope with these stresses. Could you describe how did you start to inject drugs? (at what age, what\who was the driving reason for initiation, who did push you to start, where\when it was (place), what type of drug it was, did you use non-injecting drug before hand? Alcohol consumption?)
5. And what about your current IDU practices? Describe please what has been changed since you started to inject drug? What about:
 - Kind of drug injected (poly-drug user?)
 - Non-injecting drug usage as well
 - Frequency of injection, dosage
 - Sharing of needles with others (with whom share usually; friends, lovers), pass on needles more or accept them more

- Cleaning of used needles, what is used for cleaning
- Frequency of new needles usage

IV. Awareness of HIV/AIDS, health seeking behavior and risky behavior perceptions

6. You might have heard about HIV/AIDS. What do you know about this? *Probes:* How is HIV transmitted, what should be done in order to do not get HIV/AIDS?
7. And so that we can prevent the spread of HIV/AIDS we need to know more about behavioral patterns of some groups of population. Could you tell what reasons were associated with seeking HIV testing if you previously sought it? What is your present HIV status? Which factors might cause you to plan to be tested for HIV?
8. Did you change some aspects of your life-style (drug use, sexual behavior) since hearing about HIV/AIDS? In what why? What do you think what aspects of your behavior/practices do put you in risk of getting HIV/AIDS?
9. And what about your sexual partner? Do your sexual partner use drugs too? Do you use condoms with your partner (*Probes:* primary partner, casual partner(s))? Frequency of changing partners.

V. Possible obstacles for health care seeking and information accessibility

10. What do you think what are some barriers that could hinder you to seek appropriate care or treatment you need? (financial, social, moral, legislative, attitude of health care personnel)
11. What kind of information/training would you like to receive in order to be able to deal with problems arisen. (*Probes:* how can you prevent yourself from being infected with HIV, hepatitis B, STD, others)
12. In your opinion, how and where you can receive such kind of information/ training? (*Probes:* preferred TV, radio programs, convenient hours, preferred place of meeting etc.)

VI. Financial Issues

13. Could you describe what are the resources you have to deal with injecting drug use? *Probes:* What kind of problems do you encounter? Do you have permanent salary? Who helps you?

VII. Closure

14. What are your suggestions in order to improve life, social and health conditions of IDU population in Yerevan?

THANK YOU FOR COLLABORATION

APPENDIX 3

Anonymous Questionnaire

Please take a couple of minutes to fill in this questionnaire. We completely ensure an anonymity and confidentiality of the information provided.

For each question tick an answer as appropriate.

- 1. Gender:** Male Female
- 2. Citizenship:** Republic of Armenia (go to 3) Other(specify)_____ (skip to 4)
- 3. Place of residency:** Yerevan Other (specify) _____
- 4. Type of house you live in:**
- apartment
- private house
- friends/relatives house
- transient
- homeless
- other (specify) _____
- 5. Year of birth** _____
- 6. Education completed:**
- School (up to 8 years)
- School (up to 10 years)
- College (up to 12 years)
- University (up to 15-16 years)
- More than 16 years (specify) _____
- 7. Occupation:** _____
- 8. Employment status:**
- Unemployed
- Employed by governmental organization
- Employed by private organization
- Other (specify) _____
- 7. Marital status:**
- Single
- Married
- Divorced
- Separated
- Widowed
- 8. Sexual preference:** homosexual heterosexual bisexual
- 9. Number of family members/people you live with:** _____
- 10. What was your source of income in the last month?**
- Salary (please specify) _____ drams or \$US _____
- Friends (please specify) _____ drams or \$US _____
- Relatives (please specify) _____ drams or \$US _____
- Partner (please specify) _____ drams or \$US _____
- Other (specify) _____ drams or \$US _____

THANK YOU VERY MUCH FOR YOUR COLLABORATION

APPENDIX 4

CONSENT FORM KEY-INFORMANT INTERVIEW

Purpose of the interview

The purpose of this interview is to acquire information concerning health status and behavioral patterns of some groups of population that are different in their characteristics from other groups.

Process

We ask you to participate in this interview in order to learn your experience and attitude towards the topic under investigation. Your opinion is very valuable for us. The interview will last for about an hour. You will be given several questions concerning injecting drug usage.

Risk/Benefit

There will not be any negative consequences for you after participation in this interview. It will give an opportunity to share your opinion about discussing questions.

Confidentiality

Your name will remain anonymous and will not be mentioned with the information you provide. The information received will be summarized in order to understand the problem under investigation. Your participation in this interview is absolutely voluntary. You have right to object the participation in this interview any time you would like.

If you agree to participate in this interview, please write your name below.

Your signature _____

Signature of
Interviewer _____

Date “ ____ ”, _____ 1999

APPENDIX 5

Key informant Interview

Disclosure Statement and Interview Guide

I. Introduction

Hello, my name is Gayane Ghukasyan. I am a second-year student of Public Health Department of the American University of Armenia. I am conducting a study for my Master Project and its topic relates the exploration of the behavioral patterns of intravenous drug users (IDU) in Yerevan. Your experience in dealing with IDUs and their problems will help me a lot to investigate a general picture existed. Your opinion about possible ways of improvement of health and life conditions of IDUs will be very much appreciated.

I assure you in confidentiality of information you provided; all information will be used only for further research purposes.

This interview will take about an hour and I hope you are able to devote this amount of time.

In order to not miss any information from you I am going to take notes during this interview. You are free to not answer any question you do not like.

Can we start ?

II. Warm-up questions

1. Could you describe in general the purpose and main activities of your organization? Whom it is intended serve to? What kind of services do you provide? *Probes:* In-patient or out-patient clinic it is? Treatment used? Financial issues?
2. What about any problems and difficulties encountered while running Services? *Probes:* Do you have enough wards (if in-patient Services), set up of wards, supply of equipment (medical, technical), supply of medications, etc.

III. General Information about IDU

3. Tell me please what are the general procedures of how patients apply to your Service? What is necessary for that? What kind of documents are required, medical information, lab tests, other admission procedures. What about number of patients applied? *Probes:* Increased/decreased in comparison with the last year? Two years ago? 5 years ago? Reasons for both increase/decrease.
4. Describe please general health of your patients (*Probes:* health condition in general, health problems present, history of STD, TB, HIV).

IV. Socio-demographic characteristics of IDU and causes of drug injecting initiation

5. Being involved in treatment/care or other issues dealing with IDUs you have at your disposal an information about what kind of persons they are. Describe please your patients; mean age, age range, sex prevailed, diagnosis, type of injecting drug use, poly-drug usage, non-injecting drug use, dosage, frequency of injection, socioeconomic status etc.
6. As a person having a direct contact with IDUs and the problem as a whole you might have your own perception about the possible causes of initiation of injecting drug use. Could you tell your assumptions about it? (*Probes:* at what age did they start? who/what did push them to start? type of drug started with? socioeconomic causes, psychological, etc).

V. Attitude towards IDU and possible obstacles for them to seek health care

7. For many years there was a dispute regarding the issue of how to treat intravenous drug users: as ill people or as criminals? By law, people who inject drugs are considered offenders and should be punished. As a health care professional and as an individual what do you think about this issue; how do you treat your patients (as patients or as potential criminals?).
8. What do you think what are some barriers that could hinder IDUs to seek appropriate care or treatment, or information they need? (financial, social, moral, legislative etc).

VI. Awareness of HIV/AIDS, information seeking behavior and risk perception

9. The real possibility for IDUs to get HIV and other infections transmitted via blood and sexual intercourse is a serious issue, and the value of an in time updated information about the HIV/AIDS, how it is transmitted, how it can be prevented is increasing. What do you think about their (IDUs) awareness about the problem? Do they perceive themselves at risk? What about your organization; is there such kind of possibility to provide information? What is/are it/they if any?
10. In your opinion, what should be done in order to increase awareness of IDUs about HIV/AIDS, their perceptions about risky behavior that might bring them to the infection? In what way some education/information training might be organized? *Probes*: Where it can be organized? Who will provide that training? Convenient hours (TV, radio programs, Center of rehabilitation?).

VII. Closure

11. What are your suggestions regarding what should be done to improve health and social conditions of IDU population in Yerevan? (*Probes*: change of strategies in the way of treatment, provide educational/informational materials, social and legislative issues etc.)

THANK YOU FOR YOUR COLLABORATION

APPENDIX 6

Table 1. Coding System

Code Short-form	Code Long-form	When to use code
GenHealth	General health	Any time when information on general health is mentioned by a respondent
HealthProb	Health problems	Any health problems mentioned
ServUsed	Health services used	Any health services and facilities used to take care of health problems
TypDay	Typical day	What a respondent usually does during typical day
InjReas/1	First time injecting reason	Everything that was mentioned as a reason for injecting drug use initiation
InjPlace	Injecting place	Any place (town, in-city, out-city, apartment, garden, etc.) mentioned where drug injections were done
InjEnv	Injection environment	Everything related to injecting environment: how, when, where, with whom (friends, relatives, peers, etc.)
InjAge/1	First time injecting age	At what age the first injection was done
InjType/1	Type of drug injecting first time	Information on any type of drug or drugs injected at the first time
N-Inj/B1	Non-injecting drug use before first injection	Any information on non-injecting drugs used by a respondent before the first injection
DrugPlace	Place where drug are/were found from	Any place (dialer, street corner, city name etc.) where drug(s) were found (bought, stolen etc.) from
DrugCost	Cost paid for a drug	Any information on money paid for a drug(s)
ChngInjPrac	Changes in current injecting practice	Any kind of changes happened in injecting drug use practice (frequency of injections, dosage, sharing, cleaning, environment) at the moment of the interview
InjType/Cur	Type of drug injecting currently	Information on a type of drug injecting by a respondent at the moment of interview
InjReas/Cur	Injecting reason at the moment of the interview	Everything that was mentioned as a reason for current injecting drug use
PolyDrug	Poly-drug user	Any kind of drugs used by a respondent (either injecting or non-injecting) in addition to previously mentioned drug
N-Inj/Cur	Non-injecting drug use currently	Any information on non-injecting drugs used by a respondent at the moment of interview
InjFreq	Injection frequency	Everything that was mentioned about frequency of injections by a respondent (times/day, weeks, months, etc.)
InjDose	Injection dose	Everything that was mentioned about injection dose
NeedlShar	Needle sharing	Any time when a respondent mentions about needle and other drug injecting paraphernalia sharing with others
NeedClean	Needle cleaning	Any type of cleaning of used needles and other injecting paraphernalia (bleaching, washing, heating, etc.)

Code Short-form	Code Long-form	When to use code
HIVTest	Testing on HIV	Any information related HIV testing
HIV=	HIV status	When a respondent tells about his HIV status
HIVKnow	Knowledge on HIV/ AIDS	Any kind of knowledge on HIV/AIDS (what it is, how it is transmitted, how it could be prevented)
HIVReas	Reasons for seeking HIV testing	Any type of reasons for which a respondent applied for HIV testing
HIV+	HIV positive	When a respondent mentions that he is HIV positive
HIV-	HIV negative	When a respondent mentions that he is HIV negative
ChngInjBhv	Change in drug use behavior since hearing about HIV	Any kind of changes in drug use behavior since hearing about HIV (stop sharing, cleaning, frequency, etc.)
ChngSexBhv	Change in sexual behavior since hearing about HIV	Any kind of changes in sexual behavior since hearing about HIV (condom use, decrease # of sexual partners)
RiskBhvPrep	Risky behavior perception	Any perceptions, feelings of risky behavior that might bring to the infection with HIV and other viruses
SexPartInj+	Sexual partner injects drugs	Any time when a respondent mentions about sexual contacts with IDU
CondUse	Use of condom with sexual partner	Any time when a respondent mentions about use of condom with sexual partner
Barr	Barriers to seek appropriate care	Any type of barriers to seek appropriate care (legal, financial, social, psychological, attitude of health care personnel)
InfoTrn	Information/training willing to receive	Any information/training that a respondent wants to receive
InfoTrn/Place	Place where would like to receive information/ training	Any place (town, in-city, out-city, apartment, garden, etc.) mentioned where a respondent would like to receive information/training
InjAtt	Attitude to injecting drugs	When a respondent tells about injecting drug use in general, his attitude to it, his feelings
\$	Resources	Everything related to sources of income & financial issues
Sug	Suggestions	Any suggestions regarding intravenous drug use

APPENDIX 7

Table 2. Socio-Demographic Characteristics of the Studied Individuals (All are males)

ID	Citizenship	Residency	House Type	Age	Education (years comp)	Occupation	Employment status	Marital status	Sexual preference	# family member	Income Source (\$)
1	Republic of Armenia	Ashtarak	Private house	33	School (10 years)	Driver	Unemployed	Married	Heterosexual	5	Relatives (US\$ 50)
2	Republic of Armenia	Yerevan	Private house	41	School (10 years)	N/A	Unemployed	Single	Heterosexual	3	Salary (US\$150)
3	Ukraine	Artick village	Private house	37	School (10 years)	N/A	Unemployed	Divorced	Heterosexual	4	Temporary Work (US\$300)
4	Republic of Armenia	Yerevan	Apartm.	41	College (12 years)	N/A	Employed by private org.	Married	Heterosexual	3	Other (US\$200)
5	Republic of Armenia	Yerevan	Apartm.	32	College (12 years)	N/A	Unemployed	Single	Heterosexual	5	Friends Relatives
6	Republic of Armenia	Vanadzor	Apartm.	20	School (10 years)	N/A	Unemployed	Single	Heterosexual	4	Relatives (US\$300)
7	Republic of Armenia	Yerevan	Apartm.	35	University (15 years)	Specialist on foods	Employed by government	Married	Heterosexual	4	Salary (US\$3.8)
8	Republic of Armenia	Yerevan	Apartm.	32	University (15 years)	Economist	Employed by private org.	Married	Heterosexual	5	Salary Other
9	Russia	Surgyt	Apartm.	23	School (10 years)	N/A	Unemployed	Single	Heterosexual	N/A	Salary Relatives
10	Republic of Armenia	Abovyan	Apartm.	40	School (10 years)	N/A	Unemployed	Married	Heterosexual	3	Relatives
11	Republic of Armenia	Yerevan	Apartm.	32	University (15 years)	N/A	Unemployed	Married (3 child.)	Heterosexual	6	Relatives (US\$500)
12	Republic of Armenia	Yerevan	Apartm.	30	University (15 years)	Economist	Work when find a job	Married (2 child.)	Heterosexual	4	Sold things (US\$300)

Table 1. Socio-Demographic Characteristics of the Studied Individuals (*continuation*)

ID	Citizenship	Residency	House Type	Age	Education (years comp)	Occupation	Employment status	Marital status	Sexual preference	# family member	Income Source (\$)
13	Republic of Armenia	Yerevan	Apartm.	28	University (14 years)	Geologist	Involved in trade	Married (1 child)	Heterosexual	3	Friends (\$US100), Relatives (\$US 80), Earned (\$US 200)
14	Republic of Armenia	Yerevan	Apartm.	27	School (10 years)	N/A	Unemployed	Single	Heterosexual	4	Relatives (\$US 150)
15	Republic of Armenia	Moscow	Apartm.	21	College (12 years)	N/A	Unemployed	Single	Heterosexual	4	Relatives
16	Republic of Armenia	Ashtarak	Private house	24	School (10 years)	N/A	Employed by private org.	Single	Heterosexual	2	Salary (\$US 400)
17	Republic of Armenia	Yerevan	Apartm.	23	School (10 years)	N/A	Unemployed	Single	Heterosexual	2	Salary (\$US 800)
18	Republic of Armenia	Yerevan	Apartm.	39	School (10 years)	N/A	Employed by private org.	Married (2 child.)	Heterosexual	4	Salary (\$US 300)
19	Republic of Armenia	Yerevan	Apartm.	26	University (15 years)	Engineer	Unemployed	Single	Heterosexual	3	Salary (\$US 50)
20	Republic of Armenia	Yerevan	Apartm.	33	University (13 years)	Autoconstr. departm.	Involved in a trade	Married (2 child.)	Heterosexual	4	Friends
21	Republic of Armenia	Yerevan	Apartm.	26	College (12 years)	Builder	Unemployed	Single	Heterosexual	3	Relatives
22	Republic of Armenia	Yerevan	Rent an apartm.	35	University (15 years)	Engineer	Involved in trade	Divorced	Heterosexual	0	Temporary work