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for Drugs and Drug Addiction

Paradigma Bilgi Teknolojileri

A Prevalance and Behavioral Study on HIV, Hepatitis B, Hepatitis C and Tuberculosis among Intravenous Drug Users in Gaziantep 2009

ANKARA, 2009

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Principal Investigator

Peyman ALTAN MD, MPH

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Summary

Introduction and goal: There is limited data on HIV/AIDS, Hepatitis B (HBV), Hepatitis C (HCV) and Tuberculosis (TB) among injecting drug users (IDUs) in Turkey. This study assessed knowledge, attitude and practice regarding HIV/AIDS, HBV, HCV and TB as well as serological components of these infections among IDUs.

Methods: A questionnaire was applied covering socio-demographic characteristics, knowledge and attitudes about HIV/AIDS, HBV, HCV and TB. Serological testing was performed after completion of the questionnaire. Chi-square test and t-test statistics were performed.

Results: A total of 168 IDUs were interviewed between January and March 2009. 97.0% of the participants were male. The average age of the respondents was 31.5 years. Almost half (41.1%) had only primary education. The average duration of use of addictive drug(s) was 6.14 ± 3.12 years and the average duration of injecting drug use was 3.03 ± 1.94 years while the average of age of first injection was 28.37 ± 4.37 . Drug first used was cannabis at 71.4%. Heroin was the first drug injected at 95.8%. Only 31 were using single drug. Sharing needles was 68.5%, mostly shared with friends at 59.5%. Using condom with regular partner was 71.4% and 70.8% with commercial partner.

Overall, 92.9% of IDUs in this study reported that HIV while 89.9% HBV and HCV can be transmitted by a syringe used by someone else. 89.9% reported that HBV or HCV can be transmitted by a syringe used by someone else. 91.9% mentioned that protection from HIV is possible when condom is correctly used during sexual intercourse, 56.5% reported that a healthy looking person can be HIV(+), 82.7% mentioned that a pregnant woman can transmit HIV to her baby, only 5.4% answered that a person will not get HIV from mosquito bites while 25.0% answered that a person will not get HIV by sharing food with someone who is infected.

67 IDUs have been found as susceptible for HBV while 64 were immune due to natural infection, 2 were immune due to vaccination, 9 of them were chronically infected. None of the IDUs was HIV (+), only 9 were HCV (+).

51 IDUs stated that taking TB medication can be stopped whenever feeling better, 149 IDUs stated that if people do not continue TB medication as long as prescribed, treatment will get more difficult. 90 IDUs incorrectly thought that IDUs can keep from getting TB by bleaching their needles or by not sharing needles. Only 4 IDUs thought that TB is not transmitted by sharing food, 4 IDUs thought that TB cannot be transmitted after eating at a restaurant where the cook has TB and only 2 IDUs thought that using public toilets TB cannot be transmitted. 155 IDUs thought that TB can be transmitted by working close to or living with someone infected and 152 IDUs stated that a person cured from TB can get the disease again. Moreover, 88 IDUs thought that persons with HIV or AIDS are at increased risk for developing TB. No IDU stated that there is a new kind of TB around that is not easily treated with available medicines. The majority of respondents (91.1%) recognized that drug therapy is available to cure tuberculosis, 154 stated that TB treatment is usually given in TB dispensaries and 151 mentioned that anti-TB medications are available at no charge.

Conclusions: Education builds up knowledge. Therefore, organisation of sustainable training and educational programmes reaching IDUs, would change and improve their knowledge and attitudes on HIV/AIDS, HBV, HCV and TB.

A statistical correlation has been found between education and knowledge on HIV, HBV, HCV and TB and the same was true for needle sharing and education ($\chi^2=11.7$; $P<0.01$).

Key words: Injecting drug user, HIV&AIDS, HCV, HBV, TB, knowledge, attitude, practice.

Chapter 1: Introduction

1.1 Rationale

Service statistics of the ministries of health, interior and justice pertaining to substance abuse in Turkey suggest that the problem is at significant levels. Studies in Turkey on incidence of substance abuse and use of problem substances are based on records and data of the Ministry of Health on cases of treated substance use, data from security forces as a result of their narcotics operations and data from the Ministry of Justice on substance users in prisons. Therefore, nationwide studies on substance abuse in Turkey are very limited in number. Moreover, drug users tend to keep a low profile in the community now that injecting drug use is an unlawful act. This makes accessing these individuals very difficult. Consequently, there are no behavioural or serological surveillance studies targeting substance addicts who have never received or discontinued treatment. This study was conducted in Gaziantep with second highest incidence of use of injecting drug use in Turkey and aims at testing the possibility of conducting similar studies in the future, estimate prevalence of HBV, HCV and HIV among IDUs in Gaziantep and assess their knowledge, attitude and behaviours pertaining to these diseases as well as TB. The data obtained will further help estimate number of individuals in need of treatment and plan preventive and curative services for those affected.

1.2 Goal:

The goal of the study is to associate behavioural data and results of HBV, HCV and HIV blood tests of Injecting Drug Users in Gaziantep with socio-demographic and behavioural data, determine prevalence of these infections and frequency of TB and assess TB knowledge, attitude and behaviours.

1.3 Objectives:

- To identify HBV, HCV and HIV prevalence and TB frequency among IDUs with high-risk behaviours in Gaziantep
- To associate HBV, HCV, HIV prevalence rates and TB frequency with obtained socio-demographic and behavioural data
- To test possibility of repeating studies on serological and behavioural surveillance of IDUs.

Chapter 2: Background

People have used drugs for thousands years. Opiates are the most powerful known pain killers. Their relieving and euphoric effects were known to Sumerians (4.000 BC) and Egyptians (2.000 BC) (1). Today, the problem of substance abuse is mostly related to opiates. The United Nations data suggests that 0.4% of the 15-64 world population (i.e. 16 million people) use opiates. Heroin is the most frequently used opiate among IDUs (2). Injecting drug use may be associated with many health problems including human immunodeficiency virus (HIV), Hepatitis B (HBV) infection, tuberculosis (TB) and endocarditis (3). Substance dependence and abuse is escalating as a public health and safety issue in both developing and developed countries. Health problems, poverty, violence, crime and social exclusion are only a few of the issues linked with substance dependence. Current figures estimate more than 10% HIV infection cases worldwide to be related with dirty injecting equipment (4). In many places substance dependence is intertwined with HIV and TB epidemics. HIV incidence among drug users is high especially because of use of unsafe injecting equipment. Percentage of TB infection is also high among drug users. (5)

2.1. CURRENT SITUATION IN THE WORLD AND IN TURKEY

2.1.1. Epidemiology of Substance Use in the World

Latest data suggests that the world population is around 6.9 billion (6). 4.272 billion people are in 15-64 age group. The United Nations Office on Drugs and Crime (UNODC) reports that 4.8% of this population group, that is, 208 million people are substance users (7). On the other hand, 112 million people (2.6%) of these use substances monthly. 26 million people (0.6%) are users of problem substance users.

Globally, 1.6 million cases were diagnosed as substance users in 2006. 65% of these cases were cannabis users, 14% opium, 9% cocaine, 2% depressant, 2% ecstasy and 5% amphetamine. %5 used other substances. 3% of the "other substances" group includes methaqualone, khat, LSD, synthetic narcotics, ketamine and inhalants. Khat and ketamine are not under international control (7).

In 2006/2007 period, number of drug users was 165.6 million for cannabis, 24.7 million for amphetamine, 9 million for ecstasy, 16 million for cocaine, 16.5 million for opium and 12 million for heroin. This accounts for 3.9%, 0.6%, 0.2%, 0.4%, 0.4% and 0.3% of the world population, respectively (7).

2.1.2 Geographical Location of Turkey in Terms of Drug Routes

A bridge between Asia and Europe, the geographical location of Turkey continues to be important in trafficking of illicit substances. Thus, being in close proximity to countries like Afghanistan, Pakistan and Iran which produce particularly opium and derivatives intensively and which are the origin of the heroin in the European market is and will be a risk for Turkey. Turkey is on the Balkan route – previously the Silk Road – which passes through Bulgaria, Rumania, Hungary and Austria. It continues to be affected by current routes used for smuggling opium and derivatives from east to west and amphetamine derivatives from west to east (8).

2.2. SUBSTANCE ABUSE IN TURKEY

Service statistics of the ministries of health, interior and justice pertaining to substance abuse in Turkey suggest that the problem is far from being negligible.

2.2.1 Incidence of Substance Abuse

Nationwide studies on substance abuse in Turkey are very limited in number. In this section, results of studies carried out in our country will be provided.

2.2.2 Substance Abuse among Adults (9)

"Substance Use Profile in Turkey 2003" was a major study conducted under coordination of the Ministry of Health (MoH), United Nations Substance Control Department and the 2nd Psychiatry Clinic of Ankara Numune Hospital.

The results suggest that mainly cannabis and volatile substances are used in Turkey followed, to lesser extents, by heroin, other opiates, benzodiazepines and barbiturates.

Use of substances by key persons:

- In low socioeconomic settings, men use cannabis, heroin and ecstasy; women use cannabis, heroin, benzodiazepines and opium; young people use cannabis, heroin, benzodiazepines and volatiles substances and adolescents use volatiles, cannabis and heroin,
- In medium socioeconomic settings, men use cannabis, heroin and ecstasy; women use cannabis, heroin, benzodiazepines, ecstasy and opium; young people use cannabis, heroin, ecstasy and benzodiazepines and adolescents use heroin and ecstasy,

- In high socioeconomic settings men, women, young people and adolescents mostly use ecstasy.

According to the key people, an important factor affecting the increase in use of ecstasy was the increase in accessibility and decline in prices.

Certain socio-demographic characteristics of substance users interviewed are given in Table 1. The average duration of education is six years. This is six years among convicts and interviewees in the community and seven years among those receiving treatment.

Table 1: IDUs involved in the study by certain socio-demographic characteristics (2003)

	Age	Education	Civil Status	Housing
Treatment Centre	22 yrs 15-19 of age - 45%	Average 7 yrs	Single 60%	Home 2/3
Community Sampling	26 yrs Young - 36%	Low		Home 2/3
Prison	30 yrs 20-24 age - >50%	Low	Married 40% Never married 40%	Home 80%

41% of substance users were unemployed in the past 12 months (or before being imprisoned or admitted to treatment centre). Nearly 20% had a fulltime job. 60% were unemployed in the last three months.

In the past 12 months (or before being imprisoned or admitted to treatment centre), one third of the substance users lived on wage or salary and 40% on temporary jobs. However, almost half of the respondents said that they received support from their families to provide for themselves. Nearly one third of the respondents pickpocketed, thieved, sold substance or begged in the last three months.

The majority of the respondents had previous cannabis experience. More than 25% of the whole group had previous heroin experience. The average age heroin used for the first time was 24.

- One third of respondents who used substances in the past 12 months (or before being imprisoned or admitted to treatment centre) and who used injecting equipment said that they use a new injector each time while the rest said they replace less often.
- One third of injecting substance users said they never shared injecting equipment while one fourth said they share time to time.
- Approximately one fourth of respondents shared substances from the same heater, half of them shared used cottons and half of them shared cleaning water.
- Cold water (63%), bleach (100%), alcohol or cologne (77%), boiled water (70%) or other methods are used to clean injecting and other equipment used by others.

Risky sexual behaviours are common among substance users. On average, respondents had two regular and ten irregular sexual partners in the past 12 months (or before being imprisoned or admitted to treatment centre). Use of condoms: 69% - never, 12% - seldom, 5% - sometimes, 12% - often and 2% - always.

When asked about receiving substance or money in return for sex, nearly one fourth of respondents said they paid and another one fourth said that they received substance for having sex. Percentage of giving substance (6%) or receiving money (6%) was low in this study.

The majority of respondents had history of treatment. 35% of respondents had history of treatment and 16% had history of prison. 80% of inhalant users, 49% of cannabis users and 41% of heroin users had treatment. Average number of treatments was three and average age of first treatment was 23.

2.2.3 Substance Use in Gaziantep

Gaziantep is on the route of the Silk Road and the 6th biggest province of Turkey. It is a city of industry and has a border with Syria (10).

In provinces, suspects detained because of narcotics crimes during operations of the Office of Narcotic Crimes of the Section of Preventing Smuggling and Organized Crimes complete U-forms if they volunteer to do so. According to data of 2007 forms (11), mostly men are involved in crimes related with narcotics. 46.3% of the suspects have primary and 15.0% of them secondary education. 97.5% are smokers. Average age of starting regular substance use is 27. Average income is 577 TL. This data is limited to individuals for which legal action was taken and does not pertain to general community.

2.2.4 Use of Problem substances (12)

Cannabis is the most commonly used drug in Turkey. The available data estimate the number of users of problem substances at around 1450.

2.2.4.1 Profile of Dependents under Treatment

Number of dependents under treatment: The yearly number of individuals which receive treatment is given in Figure 1. The request for inpatient treatment was 2078 in 2005, 2853 in 2006 and 2492 in 2007. 13.720 people who were treated and released on supervised liberty in 2007 were mostly outpatients.

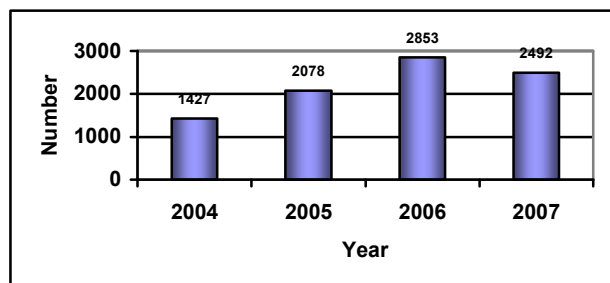


Figure 1: Individuals under treatment by years (2007)

Distribution by Sex: 95% of applicants were male and 5% were female in 2007 (n=2492).

Individuals with History of Treatment and First Timers: Distribution of individuals with history of treatment and first timers by years is given in Figure 2. In 2007, 56% of inpatients stated that it was their first time in a treatment centre while 42.4% said that they had received dependence treatment previously.

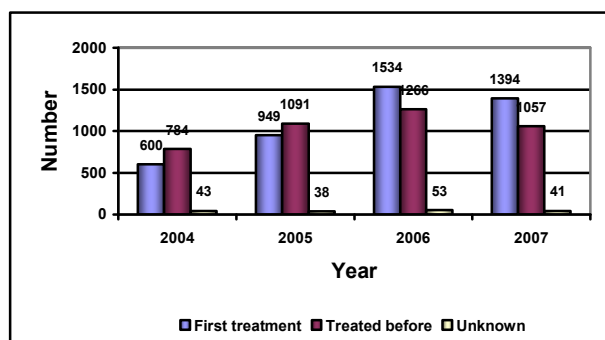


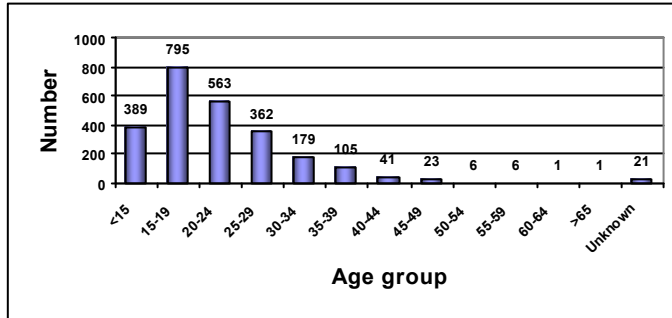
Figure 2: Individuals with history of treatment and first timers by years (2007)

Housing: 95.7% of the patients had a regular place to live and 0.6% did not (i.e. living on the streets etc.). 1.3% lived in institutions such as prisons or clinics. 2.4% did not have a place to live. 7.4% of applicants lived alone, 87.2% with their parents and 1% with friends. In 2007, 87.2% lived with family.

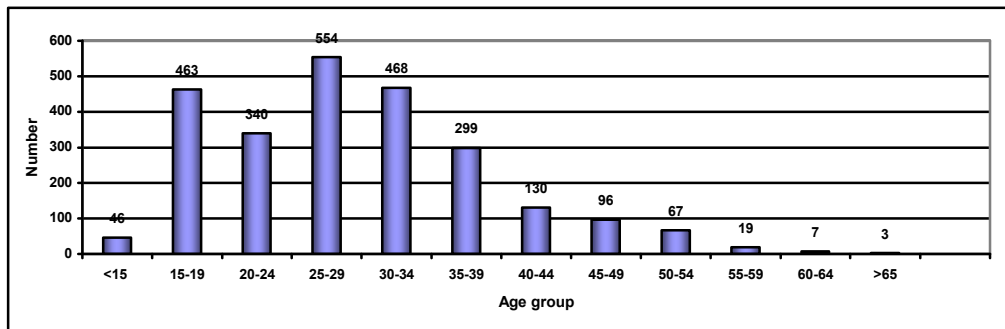
The first ten provinces that patients under treatment live in are listed in Table 2. This data suggests that 46.3% of patients live in Istanbul, 15.5% in Izmir and 6.2% in Gaziantep.

Table 2: Addicts under treatment by province of residence (2007)

Number	Province	Number of Patients
1	Istanbul	884
2	Izmir	295
3	Gaziantep	119
4	Adana	115
5	Antalya	113
6	Ankara	99
7	Elazığ	80
8	Manisa	77
9	Van	67
10	Hatay	59

Age of First Use by Individuals under Treatment:**Figure 3:** Age of first use by individuals under treatment (2007)

Age of first use of drugs by patients under treatment is shown in Figure 3. According to this, 54.5% of the patients start using drugs at 15-24 age group.

Individuals under Treatment by Age:**Figure 4:** Individuals under treatment by age (2007)

This figure shows that applicants were mostly of 25-29 years of age in 2006 (22.7%) and 2007 (22.2%). The rate of unemployment among patients treated was 64.6% in 2006 and 60% in 2007.

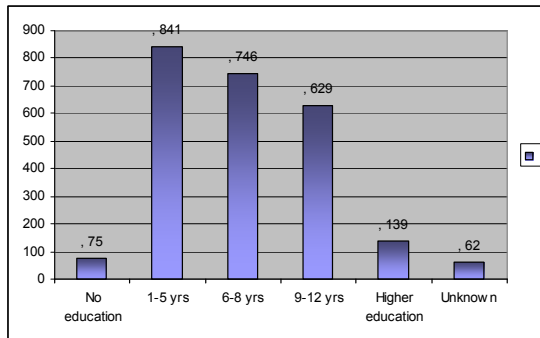
Education Status of Patients:**Figure 5:** Education status of patients (2007)

Figure 5 includes education status of patients under treatment. 63.6% of patients had primary education. This figure was 62.9% in 2006. The percentage of the population with primary or other levels of education across

the country needs to be taken into account when interpreting education status and percentage of substance use.

Patients under Treatment by Type of Substance Used:

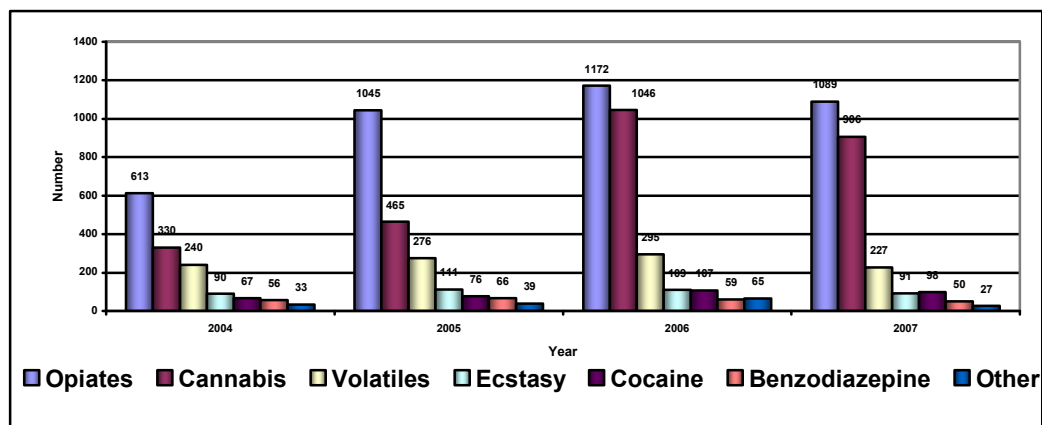


Figure 6: Patients under treatment by type of substance used (2007)

Figure 6 includes yearly distribution patients by type of substance used. Out of 2488 patients registered in 2007, 1089 used heroin, 98 used cocaine and derivatives, 50 used benzodiazepine, 91 used ecstasy, 227 used volatile substances, 906 used cannabis and 27 used other substances. 43.6% of patients were treated for opiates and 36.3% for cannabis.

Distribution by Route of Administration: See Figure 7. 21% of patients applied intravenously 30% sniffed, 41% mixed with tobacco and 8% ate or drank.

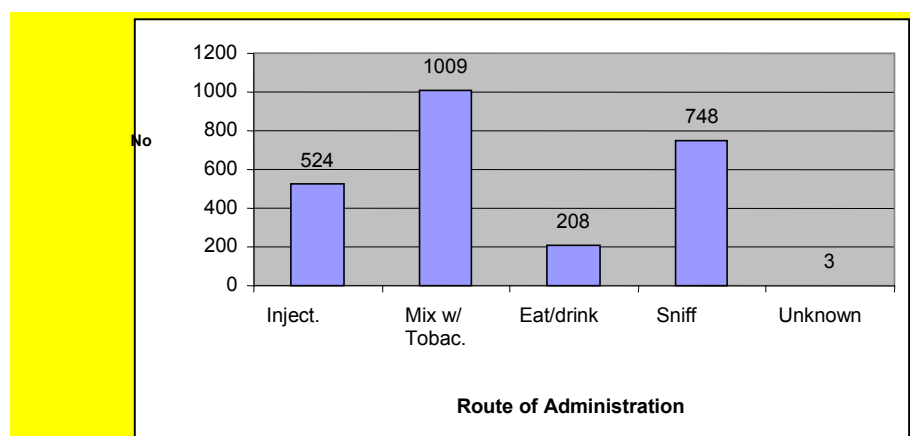


Figure 7: Distribution of substance use by patients under treatment (2007)

Substance Use Frequency: 65.9% used “every day” in the past month. 86.9% of heroin users, 75% of methadone users, 57.7% of volatile substance users, 72.3% of users of other opiates, 64% of benzodiazepine users, 47.5% of cannabis users and 56.1% of cocaine users said they used these substances every day.

Secondary Substance: 57 heroine users used cocaine and 333 used cannabis as secondary substance. 33 cocaine users used cannabis as secondary. 56 MDMA users used cannabis and 231 cannabis users used MDMA and derivatives as secondary substance. 58 volatile substance users used cannabis.

Injecting Drug Use: The status of use of injecting drugs is given in Figure 8. According to this, 6% of patients said that they used injecting drugs in the past. 21% said they still use. 67% never used. There is no information about a further 6% of patients.

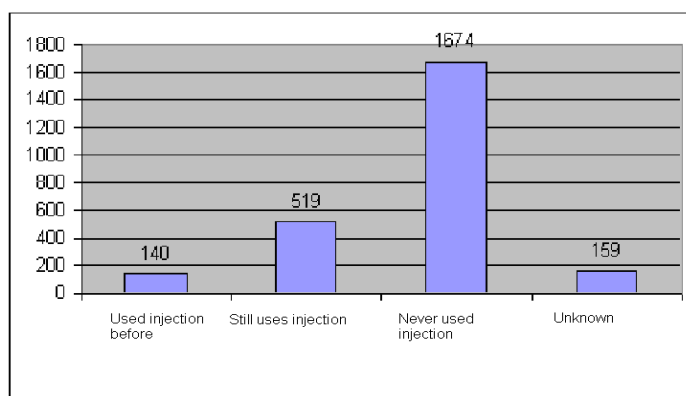


Figure 8: Distribution of patients by prevalence of use of injection (2007)

Commonly and Intensively Abused Substances

Profile of Heroin Dependents Treated: In 2007, the percentage of heroin users who applied for treatment was considerably higher than patients that use other substances. Of 1038 patients treated for heroin abuse, 69 were women and 969 were men. Majority of the patients were in 25-34 age group. Users administer mainly using injection, followed by sniffing. Considering that most users apply for treatment at this iv. stage, injection route ranks first in the records of treatment centres.

2.2.6. Communicable Diseases Associated with Drug Usage

HIV (Human Immunodeficiency Virus) infection is incident in Turkey since 1985. The total number of reported cases as one AIDS (Acquired Immune Deficiency Syndrome) case and one carrier was two in 1985 and 3370 (696 AIDS cases and 2674 carriers) as of December 2008 (Table 3). 69.5% of cases are male (Table 3). The same data suggests that more than half of the infected cases (59%) contracted the disease as a result of unprotected sex, mainly heterosexual intercourse. This is followed by homosexual/ bisexual sex (8.7%), intravenous drug dependence (4%) and blood transfusion cases (1.5%) (Table 4). 20% of cases had a history of living or travelling abroad. The age group which is affected most by the infection is 25-39 in Turkey. 16% of reported cases are foreign nationals. In recent years, foreign cases of Ukrainian and Moldovan nationality have increased (MoH, GD Primary Healthcare Services, 2008). As of 2008, the cumulative number of HIV/AIDS cases reported in Gaziantep has been 31 including dead cases since 1985.

Table 3: AIDS cases and HIV carriers reported in Turkey by years, December 2008 (MoH, GD PHC, 2008).

Year	Cases	Carriers	Total
1985	1	1	2
1986	2	3	5
1987	7	27	34
1988	9	26	35
1989	11	20	31
1990	14	19	33
1991	17	21	38
1992	28	36	64
1993	29	45	74
1994	34	52	86
1995	34	57	91
1996	37	82	119
1997	38	105	143
1998	29	80	109
1999	28	91	119
2000	46	112	158
2001	40	144	184
2002	48	142	190
2003	52	145	197
2004	47	163	210
2005	37	295	332
2006	35	255	290
2007	24	352	376
2008	49	401	450
TOTAL	647	2273	3370

Table 4: AIDS cases and HIV carriers in Turkey by route of possible transmission, December 2008 (MoH, GD PHC, 2008).

Possible route of transmission	Male	Female	Total	
			Number	%
Homosexual / bisexual intercourse	292	0	292	8.7
IV substance dependence	122	11	133	4
Homosexual / bisexual intercourse + IV substance dependence	5	0	5	0.2
Haemophilia	10	0	10	0.3
Transfusion	34	17	51	1.5
Heterosexual intercourse	1209	790	1999	59
Mother to baby	28	27	55	1.7
Nosocomial transmission	11	6	17	0.6
Unknown	637	171	808	24
Total	2348	1022	3370	100,0

It is possible that there are hundreds of undiagnosed cases as the infection may continue asymptomatic long after the virus is contracted, individuals avoid applying for test because of concerns pertaining to social dimensions, some people may disappear without proceeding with the confirmation test after getting results of the diagnostic test and infectious diseases specialists sometimes fail to notify part of the cases they follow up (13).

The distribution of AIDS cases and carriers in Turkey by possible route of transmission is given in Table 4. According to the data, the total number of IDUs (intravenous/injecting drug users) that were HIV carriers was 6 in 2008. Five of them were male and one was female. Four of them were at 25-34 age group and two of them were over 34 (MoH, GD PHC, 2008).

Hepatitis B is a notifiable disease since 1990 (13). The analysis of studies having reasonable sample size totally covering 1.2 million individuals estimates incidence of HBsAg positivity among blood donors and healthy individuals at about 6% (14).

The Immunization Advisory Board established in 1996 recommended Hepatitis B vaccination to be included in routine immunization programmes for children. The Board also recommended regular administration to health workers and groups at high risk. In 2008, 920 HBC and 5506 HBV cases were reported in Turkey. However, the number of IDUs that have HBV and HCV diseases is not known (MoH, GD Treatment Services, 2008).

According to MoH data, 21% of 2492 patients treated in substance dependence centres were IDUs (MoH, GD PHC, 2007).

2.2.7 Tuberculosis

Drug users have a high prevalence of Mycobacterium Tuberculosis (TB) infection and are at high risk for active TB (15).

Turkey is located in Central European Region together with other Balkan countries. Due to high TB case numbers, Turkey is considered as one of the prioritized countries in Europe. As of 2007, TB incidence rate is 25.2 per 100.000 population. While there are 4 TB Dispensaries in Gaziantep, TB incidence rate is 20.4/100.000 in 2007 (16). Since TB National Forms do not collect any variables regarding ID use, there is no data available on TB cases that are also IDUs.

Chapter 3: Methodology

3.1 Location and Time of Study:

The universe of this study is Gaziantep. It was conducted between December 2008 and March 2009.

3.2 Sampling of Study:

The targeted population is composed of injecting drug users (IDUs) in Gaziantep with risk behaviours who frequent certain social and commercial locations.

The total targeted number was 200. The location-time sampling method was used to reach the target group and 10 cafes frequented by IDUs quite often were visited periodically. Reaching the targeted population and implementation of the study took approximately 10 weeks.

○ Inclusion criteria

The inclusion criteria for individuals to take part in the survey are as follows:

1. Membership of a target group
2. Informed consent for taking part in the survey.
3. Respondent has not been sampled previously.
4. Respondent is NOT referred from another health centre or by an individual to participate in the survey.

3.3 Type of Study

This is cross-sectional epidemiological survey.

3.4 Variables of the Study

3.4.1 Dependent variables

Use of condoms

Sharing injecting equipment

Knowledge of HBV/HCV/HIV/TB

Education/counselling on Hepatitis B/Hepatitis C/HIV

Status of Hepatitis B/Hepatitis C/HIV testing

Homecare for a relative with HIV

Willingness to keep secret the fact that a family member is ill because of HIV

3.4.2 Independent variables

Age

Education status

3.5 Development of the Questionnaire Used in the Study

A questionnaire was used as source of data in the survey (Annex 1). The questions in the tool had already been used in two studies. The first one was conducted in Ankara, Istanbul, Trabzon and Gaziantep in the 2006-2007 period in order to identify key STIs and HIV among pregnant women visiting antenatal clinics and demographic and behavioural association. The second study was carried out in Ankara, Istanbul and İzmir in order to identify prevalence of the said diseases among unregistered sex workers, MSMs and IDUs and relevant demographic and behavioural association.

The questions were obtained from a Manual developed by USAID (United States Agency for International Development) for behaviour surveys. To these, questions related to IDUs in the United Nations UNGASS Form which is requested periodically for high risk groups and questions in the EMCDDA Standard Form Number 9 have been added. The questions were then adapted to local conditions. The questionnaire was piloted in Gaziantep.

The section on Tuberculosis in the questionnaire was prepared using some of the questions as stated by Wolfe et al (17) and Solomon et al. (18) in consultation with WHO Headquarters StopTB Partnership Unit.

The questionnaire includes 11 sections. The first section has questions about descriptive information about IDUs such as age, education level, residence etc. The second section queries about status of substance abuse. The third section includes questions about sharing injecting equipment, the fourth section about marital status and partners, the fifth section about sexual history, the sixth section about sexual history and regular partners, the seventh section about sexual history and commercial partners, the eighth section about knowledge, opinions and attitude pertaining to HIV/AIDS, the ninth section about history of health programmes, the tenth section on stigmatisation and discrimination and eleventh section on knowledge and attitude about TB.

3.6 Data Processing and Analysis

SPSS 16.0 (Statistical Package for Social Sciences) for Windows was used for data analysis. In addition to descriptive statistics, Chi square and Student's t tests were used for data evaluation.

Data was crosschecked and errors due to miscoding were corrected. Data input and analysis were completed in four weeks.

3.7 Selection of Infections Subject to the Study

HBV, HCV and HIV which are the major blood borne infections in Turkey and TB which is mainly transmitted by respiratory route were selected for the study. ELISA tests were used for HBV, HCV and HIV and PPD was used for TB.

3.8 Preparatory Field Work

Study visits to Gaziantep were conducted by the project consultant in order to brief on the objectives of the study and then inform about results.

During the first visit, project consultant briefed senior managers of Gaziantep Provincial Health Directorate and Provincial Narcotic Department about objectives of the study activities to be carried out as well as expected outcomes and requested support for the study. In addition, half-day training was organised for the field workers and survey group prior to start of the study.

During the visits, the project consultant worked intensively on training and motivation of the survey staff. Also, she constantly acknowledged contribution of IDUs and emphasised the importance of the study for them.

3.9 Monitoring and supervision

There was a constant communication between the field workers and the project consultant. The project consultant visited some of the project sites for six times. One field visit was planned every month.

3.10 Budgeting and Technical Assistance

The study was funded by EMCDDA. EMCDDA provided technical assistance in the development of survey questions and protocol.

3.11 Ethical matters:

A decision was granted by the Ethics Commission prior to the study. Moreover, consent of participants was obtained before involvement. The survey data has not been used for other purposes.

3.12 Challenges:

Average time of completing the questionnaire was 30-40 minutes. Although it was not provided for in the survey protocol, every respondent was given a number of sterile disposable injectors and offered some soft beverages in order to encourage answering the questions and increase participation.

The survey was conducted by one interviewer since IDUs declined the second worker.

Number of female respondents was limited because they are generally injecting drugs at home. Nevertheless, female IDUs involved in the study may provide a proper general idea considering the number of female IDUs that apply for treatment in Turkey.

Trusting the interviewer being a peer for IDUs, was the key to make respondents feel comfortable about discussing topics that are difficult to talk to others such as condom use.

Implementation of the survey in places frequented by IDUs was facilitated through communication with peers.

Similarly, the barrier of bias based on keeping retrospective questions in memory was overcome by the environment of trust established between the interviewer and respondents.

Chapter 4: Results

The study was conducted on 168 intravenous/injecting drug users (IDUs) between January and March 2009 in Gaziantep province. The constant “n” is 168 for each category in the tables below.

Table 5: Certain socio-demographic data concerning IDUs, Gaziantep, 2009

Sex (n=168)	Number	%
Male	163	97.0
Female	4	2.4
Transvestite	1	0.6
Age		
20-24	11	6.5
25-29	58	34.5
30-34	52	31.0
35-39	31	18.5
40+	16	9.5
X ± SD = 31.58 ± 5.067, Median= 31.0, Min – Max = 22-45		
Occupation		
Yes	164	97.6
No	4	2.4
City of Birth		
Gaziantep	57	20.4
Other	111	79.6
Education		
Illiterate	1	.6
Literate	4	2.4
Primary school	69	41.1
Secondary school	62	36.9
High school+higher education	32	19.0
Alcohol usage		
Never	2	1.2
Less than once a week	12	7.1
More than once a week	100	59.5
Every day	54	32.1
History of imprisonment		
Yes	25	14.9
No	143	85.1
History of homelessness		
Yes	8	4.8
No	160	95.2
Smoking		
Never	3	1.8
<20 per day	10	5.9
20-40 per day	105	62.5
> 40 per day	50	29.8

Table 5 includes some of the descriptive characteristics of IDUs involved in the study. 97% of them are men, 2.6% are women and 0.6% is transvestite. 34.3% are at 25-29 31.3% are at 30-34 age group. The youngest is 22 and the oldest is 45 years old. Average age is 31.58 ± 5 and the median value is 31.

164 IDUs do work and have income-generating jobs. Average monthly income is 2332.6 TL.

20.4% were born in and 79.6% were born out of Gaziantep.

64.1% had primary and 36.9% had secondary education. Only one IDU (0.6%) was illiterate. Average period of education is 7.42 (X ± SD = 7.422 ± 2.84).

59.5% have alcohol more than once a week. 32.1% drink every day.

14.9% had a history of imprisonment at least once. 8 of them (4.8%) lived on the streets for more than one week in the past 12 months.

92.3% smoke at least one pack of cigarette (20 cigarette) a day.

Table 6: IDUs by characteristics of substance abuse, Gaziantep, 2009

Duration of use of addictive drug	Number	%
1-4 years	51	30.4
5-9 years	97	57.7
10> years	20	11.9
X \pm SD = 6.14 \pm 3.12, Median= 5.0, Min – Max = 1-17		
Duration of injecting drug use		
1< year	12	7.2
1-4 years	118	70.2
5> years	38	22.6
X \pm SD = 3.03 \pm 1.94, Median= 3.0, Min – Max = 0.2-9		
Age of first drug injection		
20-24 years	37	22.0
25-29 years	67	39.9
30-34 years	49	29.2
35-39 years	13	7.7
40+ years	2	1.2
X \pm SD = 28.37 \pm 4.377, Median= 28.0, Min – Max = 20-40		
Drug first used		
Cannabis	120	71.4
Heroin (not in combination with cocaine)	3	1.8
Ecstasy	29	17.3
Captagon	11	6.5
Other cannabis+ecstasy	2	1.2
Other (sniffing heroin)	3	1.8
First drug injected		
Heroin (heroin alone)	161	95.8
Cocaine (cocaine alone)	7	4.2
Drug currently used		
Heroin	30	17.9
Cocaine	1	0.6
Cannabis and heroin	23	13.7
Pill + heroin	46	27.4
Sniff, cannabis, heroin	1	0.6
Cannabis + heroin + pill	64	38.1
Cocaine and heroin	3	1.8
Time of last injection		
Today	24	14.3
Yesterday	76	45.2
In the last 7 days	61	36.3
In the last month	7	4.2
Frequency of using drug by injection in the last month		
Only once	6	3.6
2-3 times	10	6.0
Once a week	84	50.0
2-3 times a week	56	33.3
Once a day	11	6.5
More than once a day	1	0.6

Table 6 includes characteristics of use of certain substances by IDUs involved in the study. 57.7% have used addictive drugs for 5-9 years, 30.4% for 1-4 years and 11.9% for 10 years or more. Average duration of using addictive drugs is 6.14 \pm 3.12 (1-17). 70.2% have used injecting drugs for 1-4 years, 22.6% for 5 years or more and 7.2% for less than 1 year. Average duration of using injecting drugs is 3.03 \pm 1.94 (0.2-9.0).

About the first drug used, 71.4% said cannabis, 17.3% said ecstasy, 6.5% said captagon, 2.4% said heroin and 2.4% responded as other. In the “other” group, 1.2% sniff heroin and the other 1.2% use cannabis and ecstasy together.

When asked about the first substance they injected, 95.8% replied heroin (without cocaine) and 4.2% cocaine (without heroin). Drugs they currently use are heroin, cannabis and pills (64 IDUs, 38.1%), heroin and pills (46, 27.4%), heroin (30, 17.9%), heroin and cannabis (23, %13.7) heroin and cannabis, cocaine and heroin (3, %1.8), cocaine (1, 0.6%) and heroin, sniff and cannabis (1, 0.6%). Pills mean green (special) prescription drugs such as rivotril. Respondents who use multiple drugs said that they use substances which are easiest to access.

When asked about the last time they injected, 45.2% replied “yesterday”, %36.3 in the last 7 days, 14.7% on the day the question was asked and 4.2% in the last one month.

In the past one month, 50.0% used injecting drugs once a week, 33.3% 2-3 times a week, 6.5% once a day and 1 (0.6%) more than once a day.

Table 7: Distribution of certain substance use characteristics among IDUs, Gaziantep, 2009

How often, if any, have you used a needle or syringe used by someone else before?	Number	%
Always	5	3.0
Mostly	5	3.0
Sometimes	105	62.5
Never	51	30.3
I do not know	2	1.2
In the past one month, I exchanged needles and syringes with *	Number	%**
Usual sexual partner	1	0.5
An unknown sexual partner	1	0.5
A close friend	113	56.2
A dealer	29	14.4
A professional injector	1	0.5
Someone in the shooting gallery	6	2.5
Other (I have not shared)	51	25.4
I gave/hired/lent/sold my syringe or needle to *	Number	%**
A close friend	106	59.6
A dealer	6	3.4
Someone I do not know	1	0.6
A friend in the prison	3	1.7
None	60	33.7
Frequency of cleaning of needle and syringe		
Always	12	7.1
Mostly	5	3.0
Sometimes	65	38.7
Never	84	50.0
I do not know	2	1.2
Syringes are cleaned by using:		
Cold water	2	1.2
Hot water	65	38.7
Boiling method	4	2.4
Bleach	2	1.2
Alcohol	5	3.0
I do not know	3	1.8
I do not clean	87	51.8
Can you obtain new, unused needles?		
Yes	158	94.0
No	10	6.0
Place(s) to get new, unused needles	Number	%**
Pharmacist	4	0.8
Drugstore	102	20.0
Health worker	24	4.7
Hospital	7	1.4
Friends	140	27.5
Other drug users	82	16.1
Dealer	133	26.1
Theft from legitimate source	2	0.4
Buy on streets	15	2.9
Frequency of injection with a pre-filled syringe		
Yes	17	10.1
No	143	85.1
I do not know	8	4.8
Frequency of injection with a frontloading/back loading/splitting syringe in the last month		
Sometimes	29	17.3
Never	127	75.6
I do not know	12	7.1
Frequency of sharing cooker/vial/container, cotton/filter, or rinsing water in the past 1 month		
Mostly	9	5.4
Sometimes	87	51.8
Never	65	38.7
I do not know	7	4.2
Are you currently under treatment or have you ever received treatment because of drug use?		
Previously	63	37.5
Never treated	105	62.5

*multiple choices are allowed.

**row percentage based on 168.

When asked about frequency of using a needle or syringe used by some else before, 59.55% replied “sometimes”, 30.4% said “never”, 3.0% said “always” and 3.0% said “mostly”. Overall, the percentage of injecting equipment sharing is 68.5% (Table 7).

In the past one month, 56.2% shared syringes and needles with friends, 14.4% with a dealer and 2.5% with someone in the shooting gallery. 25.4% respondents said they never share injecting equipment. Respondents were allowed to provide multiple answers to this query.

The IDUs were asked whether they lent/hired/sold used needles in the past one month and allowed to provide multiple answers. 59.6% lent/hired/sold to a friend and 3.4% to a dealer. 33.7% never lent/hired/sold.

50.0% never clean needles and syringes while 38.7% clean them sometimes. 25.6% of the former group also replied as “never” to the questions about using injecting equipment used by someone else before and exchanging needles and syringes in the past one month. This leads one to think that these individuals use new injecting equipment each time. 38.7% use hot water to clean syringes before use.

94.0% have access to new and unused needles and syringes. 27.5% obtain new and unused injecting equipment from friends, 26.1% from dealers and 20.0% from pharmacies. The respondents were allowed to provide multiple answers to this question.

85.1% do not use pre-filled syringes. 75.6% never load drugs to their syringes from others', 57.2% share cooker/vial/container, cotton/filter or rinsing water before injection.

62.5% have never received treatment for drug abuse while 37.5% had a history of treatment.

Table 8: Marital status, condom use and other relevant information about IDUs in Gaziantep, 2009.

Are you married or do you have a sexual partner?		
Currently married, living with spouse	120	71.4
Not married, living with other sexual partner	6	3.6
Never married, living with sexual partner	7	4.2
Never married	35	20.8
History of sexual intercourse in the past 12 months		
Yes	164	97.6
No	1	0.6
I do not know	1	0.6
Condom use with regular partner during last intercourse		
Yes	120	71.4
No	12	7.1
I do not know	3	1.8
I do not currently have any partner/spouse	31	18.5
I have never had sexual intercourse	2	1.2
Who suggested using condom during last intercourse?		
Myself	8	6.7
My partner	5	4.2
Joint decision	107	89.1
Reason for not using condoms		
I do not like them	6	50.0
I used other protection	1	8.3
I did not think it was necessary	5	41.6

71.4% are currently married and live with their spouses. 97.6% have had sex in the past 12 months. 71.4% used condom during last intercourse. 89.1% of respondents who used condoms reported that it was a joint decision (Table 8).

Table 9: Responses of IDUs pertaining to sex for drugs and condom use with commercial sexual partners, Gaziantep, 2009.

Have you had sex for money or drugs in the past month	No	%
Yes	72	42.8
No	96	57.2
Condom use with a commercial partner during last intercourse (n=72)		
Yes	51	70.8
No	19	26.3
I do not know	2	2.9
Who suggested using condom when you had sex with a commercial partner the last time?		
Myself	31	41.9
Joint decision	19	25.7
I do not know	5	6.7

42.8% respondents had sex to get or give money or drugs in the past one month. Of those who had a commercial sex partner, 70.8% used condoms during last intercourse and 26.3% did not. 41.9% suggested

using condoms themselves while 25.7% said it was a joint decision. 19.0% who have both regular and commercial partners use condoms with both (Table 9).

Table 10: Information level about HIV, HBV and HCV *, Gaziantep 2009.

Have you ever heard of HIV or a disease called AIDS?	Number	%
Yes	167	99.4
No	1	0.6
Have you ever heard of HBV or HCV?		
Yes	164	97.6
No	4	2.4
Can people protect themselves from HIV by using condom properly every time they have sex?		
Yes	154	91.6
No	4	2.4
I do not know	10	6.0
Can the risk of HIV transmission be reduced by having sex with only one uninfected partner who has no other partners?		
Yes	156	92.9
No	1	0.6
I do not know	11	6.5
Can a healthy-looking person have HIV?		
Yes	95	56.5
No	25	14.9
I do not know	48	28.6
Does someone get HIV from mosquito bites?		
Yes	102	60.7
No	9	5.4
I do not know	57	33.9
Is it possible to get HIV by sharing food with someone who is infected?		
Yes	101	60.1
No	42	25.0
I do not know	25	14.9
Is it possible to get HIV by injecting with needle that was used by someone else before?		
Yes	156	92.9
I do not know	12	7.1
Is it possible to get HBV or HCV by injecting with needle that was used by someone else before?		
Yes	151	89.9
No	16	9.5
I do not know	1	0.6
Do you think a pregnant woman infected with HIV can transmit the virus to her unborn child?		
Yes	139	82.7
No	2	1.2
I do not know	27	16.1

*Correct answers are highlighted in bold

99.4% have heard about HIV/AIDS and 97.6% have heard about HBV or HCV. About knowledge level on HIV/AIDS, HBV and HCV, 91.6% provided correct answer to the question whether HIV prevention is possible for uninfected couples that do not have other sexual partners. 92.9% correctly answered the question about reduced risk in case condoms are used properly every time people have sex. 92.9% were properly aware about possibility of HIV transmission and 89.9% of HBV or HCV transmission through use of a needle that had been used before. 56.5% thought a healthy looking person may be infected with HIV. 5.4% think HIV is not transmitted with mosquito bites, 25.0% said HIV is not transmitted by sharing food with someone who is HIV (+). 82.7% provided a correct answer to the question about HIV transmission from an infected pregnant woman to her unborn child. Only 2 respondents provided correct responses to all questions like the possibility of HIV prevention if the person has a single and uninfected sexual partner, reduced risk in case condoms are properly used every time people have sex, possibility of HIV infection of a healthy looking person, possibility of HIV transmission with mosquito bites and possibility of transmission by sharing food with someone who is HIV (+) (Table 10).

Table 11: HIV, HBV and HCV testing and HBV vaccination status of IDUs, Gaziantep, 2009.

HIV test	Number	%
Yes	11	6.5
No	148	88.1
I do not know	9	5.4
HBV vaccine		
Yes	8	4.8
No	160	95.2
HBV and/or HCV test		
No	157	93.5
HBV	5	3
HBV & HCV	6	3.5

6.5% had HIV, 5 had HBV, 3.5% had HBV and HCV tests. 88.1% respondents did not get HIV test, 5.4% do not remember and 93.5% did not have HBV and HCV tests (Table 11).

Table 12: HIV, HBV and HCV education/counselling status and place of education, Gaziantep 2009.

Have you received education or counselling on HIV/AIDS?	Number	%
Yes	126	75
No	42	25
Where did you get HIV/AIDS education or counselling? *	Number	%**
Private clinic	3	1.8
Internet	53	31.5
Friend	55	32.7
TV	108	64.2
Journal	95	56.5
Have you received education or counselling on HBV and HCV?	Number	%
Yes	128	76.2
No	40	23.8
Where did you get HBV/HCV education or counselling? *	Number	%**
Private clinic	1	0.6
Internet	53	31.5
Friend	70	41.6
TV	111	66.1
Journal	96	57.1

*Multiple choices are allowed.

**Row percentage based on 168.

75.0% received HIV/AIDS education/counselling services and 25.0% did not. 76.2% received HBV and HCV education/counselling while 23.8% of them did not (Table 12).

Television (64.2%) is the first source of HIV/AIDS education, followed by newspapers (56.2%), friends (32.7%) and the Internet (31.5%). The first source of HBV and HCV education is television (66.1%), followed by newspapers (57.1%), friends (41.6%), Internet (31.5%) and private clinics (0.6%).

Table 13: HIV/AIDS related attitude of IDUs involved in the study, Gaziantep 2009.

If one of your relatives were infected with HIV, would you be willing to provide him/her care to at home?	Number	%
Yes, regardless of level of kinship	1	0.6
Yes, if very close	119	70.8
No, regardless of level of kinship	10	6.0
I do not know	38	22.6
If a family member were infected with HIV, would you rather keep it secret?		
Yes	41	24.4
No	114	67.9
No idea	13	7.7

70.8% said they would provide relatives with HIV infection care if they are very close. 6.0% said they would not, regardless of level of kinship. 1 IDU (0.6%) said yes, regardless of level of kinship. 22.6% of them do not know (Table 13).

If a family member were infected with HIV, 24.4% would rather keep it secret while 67.9% would rather not. 7.7% respondents do not have an idea (Table 13).

Table 14: Positive HIV, HBV and HCV test results among IDUs involved in the study, Gaziantep 2009.

	Number (n=168)	%
HIV/AIDS	0	0.0
HbsAg	15	8.9
AntiHbs	72	42.9
AntiHbcIgG	5	3
AntiHbcIgM	99	58.9
HCV	9	5

None of the respondents was found to be HIV positive. On the other hand, 15 were HbsAG (+), 5 IDUs lead one to think of acute infection in window period. 67 IDUs have been found as susceptible for HBV while 64 were immune due to natural infection, 2 were immune due to vaccination, 9 of them were chronically infected and 20 IDUs have been either resolved from infection or were low level chronic infection. Moreover, 9 IDUs were HCV(+) (Table 14).

Table 15: Knowledge about HIV/AIDS and Hepatitis B and C of IDUs by education status *, Gaziantep, 2009.
Answers for questions on HIV/AIDS, HBV and HCV

Education														P
Illiterate		Literate		Primary School		Secondary School		High school/Higher Education		X ²				
No	%	No	%	No	%	No	%	No	%					
Have you ever heard of HIV or a disease called AIDS?														
Yes	1	0.6	3	1.8	69	41.3	62	37.1	32	19.2	41.24	0.00		
No	0	0	1	100	0	0	0	0	0	0				
Have you ever heard of HBV or HCV?														
Yes	1	0.6	3	1.8	67	40.9	61	37.2	32	19.5	9.847	0.04		
No	0	0	1	25	2	50	1	25						
Can the risk of HIV transmission be reduced by having one uninfected sexual partner who has no other partners?														
Yes	1	0.6	3	1.9	63	40.9	58	37.7	29	18.8	5.206	0.73		
No	0	0	0	0	2	50	2	50	0	0				
I do not know	0	0	1	10	4	40	2	20	3	30				
Can people protect themselves from HIV by using condom correctly every time they have sex?														
Yes	0	0	3	1.9	66	42.3	57	36.5	30	19.2	18.77	0.01		
No	0	0	0	0	0	0	1	100	0	0				
I do not know	1	9.1	1	9.1	3	27.3	4	36.4	2	18.2				
Can a healthy-looking person have HIV?														
Yes	0	0	1	1.1	49	51.6	22	23.2	23	24.2	32.14	0.0		
No	1	4.0	2	8.0	9	36.0	11	44.0	2	8.0				
I do not know	0	0	1	2.1	11	22.9	29	60.4	7	14.6				

Answers for questions on HIV/AIDS, HBV and HCV													
Education													
	Illiterate		Literate		Primary School		Secondary School		High school/Higher Education		X ²	P	
	No	%	No	%	No	%	No	%	No	%			
Does someone get HIV from mosquito bites?													
Yes	1	1.0	1	1.0	40	39.2	36	35.3	34	23.5			
No	0	0	0	0	5	55.6	3	33.3	1	11.1	7.280	0.5	
I do not know	0	0	3	5.3	24	42.1	23	40.4	7	12.3			
Is it possible to get HIV by sharing food with someone who is infected?													
Yes	0	0	1	1.0	51	50.5	27	26.7	22	21.8			
No	0	0	0	0	12	28.6	24	57.1	6	14.3	31.66	0.00	
I do not know	1	4.0	3	12.0	6	24.0	11	44.0	4	16.0			
Is it possible to get HIV by injecting with needle that was used by someone else before?													
Yes	0	0	1	0.6	63	40.4	62	39.7	30	19.2	45.82	0.00	
I do not know	1	8.3	3	25.0	6	50.0	0	0	2	16.7			
Is it possible to get HBV or HBC by injecting with needle that was used by someone else before?													
Yes	0	0	1	0.7	64	42.4	58	38.4	28	18.5	34.49	0.00	
I do not know	1	6.2	3	18.8	5	31.2	4	25.0	3	18.8			
Do you think a pregnant woman infected with HIV can transmit the virus to her unborn child?													
Yes	0	0	1	0.7	53	38.1	55	39.6	30	21.6	25.56	0.00	
No	0	0	0	0	0	0	1	50	1	50			
I do not know	1	3.7	3	11.1	16	59.3	6	22.2	1	3.7			

*Correct answers are highlighted in bold

The correlation between the answer given to the question about possibility of HIV prevention in the case of uninfected couples that do not have sexual relations with others and level of education was not significant ($P>0.01$). On the other hand, the correlation between education level and answers to questions about reduced HIV risk by using condoms during every intercourse, possibility of getting HIV with mosquito bites, possibility of getting HIV by sharing food with someone with HIV and possibility of mother to baby HIV transmission during pregnancy was found to be significant (Table 15).

Only the correlation between age and use of condoms during every intercourse was found to be significant ($X^2=20.14$; $P<0.01$).

Table 16: Sharing injecting equipment by education level of IDUs involved in the study, Gaziantep, 2009.

Do you share needles or syringes?	Education					
	Illiterate+Literate+ Primary School		Secondary school		High school+Higher education	
	Number	%*	Number	%*	Number	%*
Yes	60	53.1	36	31.9	17	15.0
Never	14	25.5	26	47.3	15	27.3
Total	74	78.6	62	79.2	32	42.3
P<0.01						

*Row percentage

The correlation between sharing injecting equipment and education level was significant ($X^2=11.7$; $P<0.01$) (Table 16).

The correlation between sharing injecting equipment and age distribution was not significant ($X^2=1.126$; $P>0.05$).

The correlation between duration of ID use and sharing injecting was not significant ($X^2=4.99$; $P>0.05$).

The correlation between use of condoms with regular sexual partner and education level was not significant ($X^2=0.28$; $P>0.05$).

The correlation between use of condoms with regular sexual partner sharing injecting equipment was not significant ($X^2=1.045$; $P>0.05$).

Table 17: Knowledge level among IDUs involved in the study about TB*, Gaziantep, 2009.

Does a any of your family members, friends or peers have TB?	Number	%
Yes	10	6.0
No	150	84.3
No idea	8	4.7
Have you had coughs for more than 3 weeks?		
Yes	4	2.4
No	163	97.0
No idea	1	0.6
TB medication can be stopped when you start feeling better		
Yes	51	30.4
No	100	59.5
No idea	17	10.1
If people do not take their TB medication as long as prescribed, it will be harder for them to be treated.		
Yes	149	89.2
No	1	0.6
No idea	17	10.2
IDUs can avoid getting TB by bleaching their needles or by not sharing needles		
Yes	90	53.6
No	32	19.0
No idea	46	27.4
TB can be transmitted by sharing food		
Yes	150	89.3
No	4	2.4
No idea	14	8.3
TB can be transmitted after eating at a restaurant where the cook has TB		
Yes	152	90.5
No	4	2.4
No idea	12	7.1
TB can be transmitted by using public toilets		
Yes	152	90.5
No	2	1.2
No idea	14	8.3
TB can be transmitted by working close to or living with someone with TB		
Yes	155	92.3
No	2	1.2
No idea	11	6.5
A person cured from TB can get the disease again		
Yes	152	90.5
No	2	1.2
No idea	14	8.3
Persons with HIV or AIDS are at increased risk for developing TB.		
Yes	88	52.4
No	14	8.3
No idea	66	39.3
There is a new type of TB around that is not easily treated with available medicines.		
Yes	0	0
No	4	2.4
No idea	164	97.6
Drug therapy is available to cure tuberculosis		
Yes	153	91.1
No	2	1.2
No idea	13	7.7
Anti TB medications are available free of charge		
Yes	144	85.7
No	2	1.2
No idea	22	13.1
TB treatment is usually given in TB dispensaries		
Yes	151	89.9
No	1	0.6
No idea	16	9.5

*Correct answers are highlighted in bold

6.0% stated that someone either a family member or friend or peer had TB. 3.4% have had coughs for more than 3 weeks. They were referred to nearest TB dispensaries (Table 17).

30.4% said that taking TB medication can be stopped whenever you start feeling better. 89.2% stated that if people do not take their TB medication as long as prescribed, it will be harder for them to be treated.

There were five questions about transmission of tuberculosis with an overall correct response percentage of 0.6%. 90 respondents incorrectly thought that (53.6%) IDUs can avoid TB by bleaching their needles or by not sharing needles. Only 4 (2.4%) thought that TB is not transmitted by sharing food. 2.4% thought that TB is not transmitted after eating at a restaurant where the cook has TB. Only 2 of them thought that TB is not transmitted by using public toilets. 92.3% thought that TB can be transmitted by working close to or living with someone who has TB and 90.5% stated that a person cured from TB can get the disease again.

52.4% thought that persons with HIV or AIDS are at increased risk for developing TB. None of them (0%) thinks that there is a new type of TB around that is not easily treated with available medicines.

There were questions that were asked to assess the respondents' knowledge of tuberculosis treatment. The overall correct response rate for this part of the survey was 83.3%. The majority of respondents (91.1%) recognized that drug therapy is available to cure tuberculosis, 89.8% stated that TB treatment is usually given in TB dispensaries and 85.7% mentioned that anti TB medications are available free of charge.

Table 18: PPD test results of IDUs, Gaziantep, 2009.

	No (n=53)	%
0.1-0.4	18	34.0
0.5-0.9	29	54.7
1.0+	6	11.3

53 participants volunteered to be tested for PPD. 6 PPDs were higher than 1.0 cm and 29 PPDs (54.7%) were 0.5-0.9 cm (Table 18).

Table 19: Knowledge of TB among IDUs involved in the study by education status * , Gaziantep, 2009.

Answers for questions on TB		Education											X ²	P
		Illiterate		Literate		Primary School		Secondary School		High school/Higher Education				
		No	%	No	%	No	%	No	%	No	%			
TB medication can be stopped whenever feeling better														
Yes		0	0	1	2.0	31	60.8	14	27.5	5	9.8	23.12	0.00	
No		0	0	2	2.0	32	32.0	41	41.0	25	25.0			
No idea		1	5.9	1	5.9	6	35.3	7	41.2	2	11.8			
If people do not take their TB medication as long as prescribed, it will be harder for them to be treated.														
Yes		0	0	2	1.3	61	40.9	58	38.9	28	18.8	18.15	0.02	
No		0	0	0	0	1	100.0	0	0	0	0			
No idea		1	5.9	2	11.8	7	41.2	4	23.5	3	17.6			
IDUs can avoid getting TB by bleaching their needles or by not sharing needles														
Yes		0	0	1	1.1	45	50.0	25	27.8	19	21.1	13.63	0.09	
No		0	0	1	3.1	10	31.2	14	43.8	7	21.9			
No idea		1	2.2	2	4.3	14	30.4	23	50.0	6	13.0			
TB can be transmitted by sharing food														
Yes		0	0	2	1.3	64	42.7	54	36.0	30	20.0	23.609	0.00	
No		0	0	0	0	1	25.0	3	75.0	0	0			
No idea		1	7.1	2	14.3	4	28.6	5	35.7	2	14.3			
TB can be transmitted after eating at a restaurant where the cook has TB														
Yes		0	0	2	1.3	63	41.4	57	37.5	30	19.7	29.74	0.00	
No		0	0	0	0	0	0	3	75.0	1	25.0			
No idea		1	8.3	2	16.7	6	50.0	2	16.7	1	8.3			
TB can be transmitted by using public toilets														
Yes		0	0	2	1.3	64	42.1	57	37.5	29	19.1			
No		0	0	1	50.0	0	0	0	0	1	50.0	34.99	0.00	
No idea		1	7.1	1	7.1	5	35.7	5	35.7	2	14.3			

	Illiterate		Literate		Primary School		Secondary School		High school/Higher Education		X ²	P	
	No	%	No	%	No	%	No	%	No	%			
TB can be transmitted by working close to or living with someone who has TB													
Yes	1	0.6	2	1.3	62	40.0	58	37.4	32	20.6			
No	0	0	0	0	1	50.0	1	50.0	0	0	16.07	0.04	
No idea	0	0	2	18.2	6	54.5	3	27.3	0	0			
A person cured from TB can get the disease again													
Yes	0	0	1	0.7	63	41.4	59	38.8	29	19.1			
No	0	0	1	50.0	1	50.0	0	0	0	0	42.63	0.00	
No idea	1	7.1	2	14.3	5	35.7	3	21.4	3	21.4			
Persons with HIV/AIDS or AIDS are at increased risk for developing TB.													
Yes	0	0	1	1.1	46	52.3	22	25.0	19	21.6	17.38	0.02	
No	0	0	0	0	4	28.6	8	57.1	2	14.3			
No idea	1	1.5	3	4.5	19	28.8	32	48.5	11	16.7			
There is a new type of TB around that is not easily treated with available medicines													
No	0	0	0	0	3	75.0	1	25.0	0	0	2.2	0.69	
No idea	1	0.6	4	2.4	66	40.2	61	37.2	32	19.5			
Drug therapy is available to cure tuberculosis													
Yes	1	0.7	2	1.3	62	40.5	57	37.3	31	20.3	13.97	0.08	
No	0	0	0	0	2	100.0	0	0	0	0			
No idea	0	0	2	15.4	5	38.5	5	38.5	1	7.7			
Anti TB medications are available free of charge													
Yes	0	0	1	0.7	61	42.4	54	37.5	28	19.4	33.22	0.00	
No	0	0	1	50.0	0	0	1	50.0	0	0			
No idea	1	4.5	2	9.1	8	36.4	7	31.8	4	18.2			
TB treatment is usually given in TB dispensaries													
Yes	0	0	2	1.3	63	41.7	57	37.7	29	19.2	52.44	0.00	
No	0	0	1	100.0	0	0	0	0	0	0			
No idea	1	6.2	1	6.2	6	37.5	5	31.2	3	18.8			

*Right answers are highlighted in bold

There was a significant correlation between education status and stopping TB medication whenever one feels better, increased difficulty of treatment if people do not take their TB medication as long as prescribed, transmission of TB by sharing food, transmission of TB after eating at a restaurant where the cook has TB, transmission of TB by using public toilets, transmission of TB working close to or living with someone who has TB, getting TB again after the disease had already been cured, increased risk of developing TB for people with HIV/AIDS, anti-TB drugs being free of charge and TB treatment mainly in TB dispensaries (Table 19). However, no statistical correlation has been found between education status and knowledge of MDR cases, cure of TB with drug therapy and transmission of TB by bleaching needles or by not sharing needles.

Chapter 5: Discussion

Injecting drug use is a global phenomenon in an increasing number of countries with an estimated number of 13.2 million IDUs worldwide in more than 130 countries (19). ID use is related to a broad range of health conditions such as HIV, HBV, HCV, TB, endocarditis, bone and joint problems and other health problems (3). The most important known risk factor for HIV and HCV infection in IDUs is the reuse of injecting equipment previously used by someone else (so-called “sharing”) as this behaviour may transmit viruses via needles/syringes among IDUs (20).

This study has explored the knowledge, attitude and practices as well as serological characteristics of HIV, HBV, HCV and TB among IDUs in Gaziantep.

The number of participants reached was 168 in the study. This was very encouraging, because another study which targeted CSWs, MSMs and IDUs in three big cities of Turkey in 2007 had only reached 68 IDUs in total, which did not reflect a representative distribution for the risk group (21).

The majority of participants (34.5%) to this study were in the 25-29 age group. The youngest respondent of the study population was 22 and the oldest 45 years of age. Such age distribution was consistent with the cases reported by the Provincial Security Directorate in Gaziantep (11) Based on these results it can be concluded that IDUs in Gaziantep are mainly of younger age groups.

The majority of IDUs were male. The male (including one transvestite) and female ratio was 97.6% and was consistent with the cases reported by the security directorate. 97.6% of respondents have an income generating occupation with an average monthly income of 2333 TL. Police reports report lower monthly figures. This leads one to think that the IDUs were perhaps not telling the truth. Another reason may be that those with adequate monthly income, do not need to sell drugs and thus not get arrested by the police.

The majority of cases (79.6%) were born outside of Gaziantep. This finding has been considered appropriate since Gaziantep, an industrial city of Turkey, has been receiving many immigrants from other cities of Turkey especially during the last 10 years. The net rate of immigration to Gaziantep is ‰ 3.13 as of 2000 (22).

It is a well-known that education and age are important variables in the protection of health and development of health behaviour patterns. In this study, the majority of IDUs have primary level education at 41.1% followed by secondary education at 36.9%. These data were consistent with the educational situation of both arrested IDUs and the general population living in Gaziantep. According to Turkish Statistics Institution data, 33.2% of the population has primary education and 17.8% have secondary education (22).

The risk of sexual transmission associated with injection is often neglected among IDUs (23). On the other hand, alcohol consumption is been associated with increased sexual risk (24) as well as injection risk behaviours (25). Results from the General Social Survey in the United States indicate that the percentage of respondents who consume alcohol tend to engage in high-risk sexual behaviours at least twice as higher than those who do not drink (26). Moreover, among crack users and injectors recruited from 22 U.S. cities, Booth et al. (2000) (27) found that alcohol consumption is associated with unprotected sex. The majority of IDUs involved in this study drink alcohol more than once a week while 54 (32.1%) reported drinking every day, which may lead to especially injection risk behaviours like sharing syringes. 64.8% of IDUs who consume alcohol every day also share needles. 42.9% of respondents have regular sexual partners and use condoms. These figures support the studies mentioned above.

Jails may foster the spread of HIV (28) and other blood borne infections like HCV among drug users. On the other hand, both ID use and high-risk sexual behaviours have been identified as the most common transmission ways of HIV in prisons (29). In Turkey drug and injecting materials such as needles are not allowed to be used by prisoners. Magnetic control devices are used to prevent admission of such tools. However, people sometimes manage to get a few of these through checkpoints. On the other hand, jail keepers are not willing to distribute condoms to inmates in prisons due to socio-cultural norms. The guardians in selected prisons had been given peer education under “Turkey HIV/AIDS Prevention and Support Programme” funded by the Global Fund in 2007-2008. 25 IDUs (14.9%) that took part in this study reported history of imprisonment. 5 of them injected drugs during their stay in prison. These results imply the necessity to provide education on the effectiveness on harm reduction interventions in prisons.

Homeless people are at high risk for both latent and active TB because they live in shelters for the homeless and similar facilities and are more likely to engage in risk behaviours such as using injecting drugs and other substances of abuse (30). Moreover, several studies have demonstrated high rates of substance abuse among tuberculin positive individuals or those at high risk for infection (31). Howard et al. reported independent associations for tuberculin positivity and crack cocaine use, as well as alcoholism, among participants seronegative for human immunodeficiency virus (HIV) (32).

Given the connection between substance abuse and TB, along with high rates of reported drug use and abuse, and of alcohol use and abuse among homeless persons, the potential for HIV, HBV, HCV and TB

infection is high among homeless populations (33, 34). In Turkey, there are no shelters for the homeless and, due to social support, the number of poor people living outside is not as many as in Europe. Based on the definition of the questionnaire, 8 IDUs mentioned that they have lived on the streets for more than one week in the last 12 months. Detailed data supports the results of the studies mentioned above. Of them, 7 consume alcohol everyday, 5 share needles, 2 do not use condoms with regular partner and 4 do not use condom with commercial partner. Only one out of 3 IDUs agreed for PPD testing and PPD of each was above 10 mm.

Smoking increases risks for multiple causes of illness and death (Centres for Disease Control 1999a). This is no less true for illicit drug users. In an 11-year retrospective cohort study of 845 people who had been in addictions treatment, Hurt and colleagues found that 50.9% of deaths were due to tobacco-related causes (35). This rate of tobacco-related mortality was twice that expected in the general population. Similarly, Hser et al. (36) found that cigarette smoking was associated with mortality above and beyond deaths due to opiate use—in their 24- year follow-up of narcotics addicts who were admitted to drug treatment in 1964, the death rates of smokers were four times that of non-smokers. Estimates of cigarette smoking among people in drug treatment settings range from 74% to 88%. (37); however, most illicit drug users never enter treatment. Moreover, several recent studies have found that clients in treatment for drug abuse are interested in quitting smoking (38, 39, 40) and that cigarette quit attempts do not cause relapse to illicit drug use (41, 42).

In this study 155 IDUs were smoking more than 20 cigarettes per day and only 3 IDUs were no smokers. This result implies that drug treatment services and potential harm reduction programmes in Turkey also need to include counselling services on quitting smoking and special focus needs to be given on smoking related health consequences.

The duration of ID use is an important determinant of HIV infection. It is associated with HIV, HBV and HCV infections. Data suggest a direct and proportionate increase in infection prevalence with duration of infection (43). On the other hand, in Lamden et al's study, (1998) duration of ID use emerged the strongest predictor of HCV and HBV infections (44). However, in this study no significant association has been found between duration of drug injection and HBV, HCV and HIV prevalence.

Young IDUs have been found to be at higher risk of acquiring HIV than older ones (45). A study in Ukraine suggested that IDUs were at higher risk across all risk measures than those who were older and had been injected longer. In a study of Zhao et al (46) it was reported that young IDUs engage in high risk behaviour like unprotected sex, failing to clean shared injecting equipment. In this study, the majority of IDUs (61.9%) were in younger (i.e. 20-29) age group. 76% of them engage in high risk behaviours and share needles.

Data from 54,573 respondents aged 12-21 years old from the 2002-2003 National Survey on Drug Use and Health (NSDUH) showed that earlier ecstasy initiation was significantly associated with subsequent other illegal drug initiation (marijuana, cocaine and heroin). The mentioned study shows that marijuana initiation precedes ecstasy use and that the latter precedes the initiation of cocaine and heroin use, even after controlling for previous marijuana initiation and deviant behaviours and psychiatric problems. Therefore, ecstasy initiation seems to play a role in the subsequent initiation of cocaine and heroin (47). On the other hand, Coffey et al. has shown that the transition from cannabis initiation to harmful use is more likely in males for whom drug availability is a strong determinant (48).

In a report published by Ministry of Justice of Turkey on Narcotics Crimes in 2009 based on the results of a study carried out in 12 cities of Turkey targeting 3528 detainees of narcotics crimes, the drug first used by the majority of participants (85.0%) was cannabis (49). This is consistent with the results of this study carried out in Gaziantep. In this study, the drug first used was cannabis (71.4%) followed by ecstasy (17.3%) and captagon (6.5%). IDUs report that the availability of drug is the most important factor for starting to use drugs.

The type of drug an IDU chooses to inject can be seen as a characteristic of an IDU. Therefore, it can influence risk behaviour (50). Higher rates of HIV infection are associated with cocaine and heroin injection than with heroin injection alone, probably because of the higher injection frequency of cocaine injections (51). In this study, heroin was the first drug injected by the majority of IDUs (95.8%). Such a choice might be due to individual characteristics of IDUs but also social network as mainly seen in venues where IDUs frequently meet each other.

Since the 1970s, problem drug users have been shown to adjust the ingredients of their drug menus according to the availability of drugs on the market and at different stages in their lives. They may substitute the unavailable substance with another, not necessarily of the same type (52). This statement was consistent with the findings of this study reflecting drugs currently used like heroin, cannabis and pills (38.1%), heroin and pills (27.4%), heroin and cannabis (%13.7), and heroin, sniff and cannabis (0.6%). Only 31 IDUs were using single drug. Respondents who use polydrug said that they use substances which are easiest to access. On the other hand, the alcohol consumption by IDUs every day, an habitual drinking in the evenings, at 32.5% implies, being less than the majority, that polydrug use in Gaziantep is far from the definition of

'polydrug use' used in some countries (52). However, the high ratio of cigarette smoked per day at 92.3% may refer a polydrug use.

IDUs reuse injecting equipment and share their injection paraphernalia with their stable partners, with friends, with unknown IDUs, and pick them even up from the ground in shooting galleries (53). Sometimes IDUs buy injecting equipment from drug dealers without knowing if those paraphernalia are new or used (54). It is also known that IDUs buy syringes, which are already filled with the drug solution from drug dealers, also without any knowledge about the cleanliness of the injecting equipment and the drug solution (55).

The study aimed to explore the prevalence of syringe-borne and sexually transmitted diseases among IDUs in St.Petersburg and simultaneously to identify behavioural, social, and cultural parameters of HIV and STD risks within this population (56). 42.6% of the respondents reported needle sharing in the past 30 days. Needle sharing was found in 65% of participants, 57% of the IDUs reported that they ever have shared cotton, and 60% reported that they have ever shared spoons (56). 18% of the subjects reported needle/syringe sharing and 71% other paraphernalia than needles/syringes sharing. 45.2% stated that they reused their own syringes in the last month.

68.5% of the participants that took part in the study share needles. 57.2% of IDUs reported that they have ever shared cookers/vials/containers or cotton/filters. Such high proportion of sharing paraphernalia may be due to lack of awareness and knowledge on the protection of HIV, HBV and HCV.

HCV contaminated spoons, (cotton) filters, water, and other paraphernalia might also be transmitters for HCV transmission (56) while the literature on ID use provides no detailed information regarding the transmissibility of HIV by means of this injection paraphernalia. Therefore, it is plausible that sharing of different injection paraphernalia substantially contribute to different probabilities of HIV and HCV transmission. Those considerations are confirmed by the fact that in some countries HIV prevalence among IDUs has declined or remains stable at a relatively low level whereas HCV prevalence remains high (57). That suggests that HCV has more potential sources of exposure than HIV in the injection setting through the transmissibility by means of other injecting equipment than needles/syringes (58). In this study low prevalence rate of HIV while higher rates of HCV and HBV may be explained by the transmissibility by means of other injecting equipment than needles/syringes.

Frontloading and backloading are practices whereby a drug solution is squirted from a donor syringe into another, either by removing the plunger (backloading) or needle (frontloading) from the receiving syringe (56). Frontloading and backloading have been shown to increase the risk of HIV transmission by directly placing blood within the needle and syringe (45). A number of studies found that "backloading" and "frontloading" were independent predictors for HIV infection (45). Using pre-filled syringe was 10.1% and frontloading 17.3% which may imply the very low level of HIV reported in this study.

Sharing of needles and syringes may be reduced if IDUs have ready and affordable access to sterile supplies. There is strong evidence that increasing the availability of injecting equipment, through such approaches as needle and syringe exchange programmes and pharmacy outlets, reduces sharing and the risk of HIV infection (59)

In Turkey no NEP has been established yet. In this study places to obtain unused and new syringes and needles are friends (27.5%) followed by dealers (26.1%) and pharmacies (20.0%). Pharmacy is the last option perhaps because of accessibility problems. Another reason may be that pharmacists are sometimes unwilling to sell injecting equipment. The relative unaffordable cost of syringes and needles might as well be another reason. On the other hand, some of the respondents reported that they do all it takes to find unused needles and syringes.

In the study of Benninghoff et al condom use with steady partner was reported by 26.7% and with occasional partner by 70% of the participants (39). Moreover, in Folch et al. study it has been shown that IDUs use condoms with occasional partners (60.3%) much more often than with steady partners (30.8%) (59). Another study indicated that 32% of the respondents reported consistent condom use with steady, and 64.6% with casual partners (60). Moreover, in the operational research on STI/HIV surveillance carried out three big cities of Turkey in 2007, it has been found that condom usage among IDUs in treatment centres was 39.7% (21). Moreover, in a study on behavioural change among injecting drug users (IDUs) in HIV/AIDS in İstanbul and Gaziantep provinces under "Turkey HIV/AIDS Prevention and Support Programme" completed in January 2008, it was found that %36 of participants used condoms and 72% avoided sharing injecting equipment. However, the total number of participants was 25, which failed to meet requirements of representativeness. The majority of the respondents knew about HIV/AIDS and risk of transmission, but they still had hesitations and misconceptions about routes of transmission (Ministry of Health, 2007).

Regarding condom use, this study, contrary to above mentioned studies, showed that IDUs use condoms slightly more often with steady partners (71.4%) than with occasional partners (70.8%). One of the main reasons of higher percentage of use condoms with regular partners is that their spouses insist on using

condoms now that ID use is associated with healthy lifestyles which might also lead to other health problems such as STIs and HIV in case condoms are not used.

When assessing knowledge, opinion and attitudes of IDUs to HIV, HBV and HCV, the mean value of the answers given to 8 questions was 5.37 ± 1.29 , 0-8. 1 IDU (0.6%) did not manage to answer any of the questions correctly. Only two IDUs (1.2%) gave correct answers to all questions. Although the vast majority of participants have heard about HIV and HBV and HCV, only 6.5% reported having been tested for HIV and 3.5% for HBV and HCV. 4.8% reported having received hepatitis B vaccine. The majority of participants correctly answered the question on the transmission of HBV, HCV and HIV by injecting with needle that was already used by someone else. 92.9% correctly answered the question about reduced risk in case condoms are used properly every time people have sex. 97.6% provided correct answer to the question whether HIV prevention is possible for uninfected couples that do not have other sexual partners. 56.5% thought a healthy looking person may actually be infected with HIV. 82.7% provided a correct answer to the question about HIV transmission from an infected pregnant woman to her unborn child. Although the knowledge level of participants on transmission of HBV, HCV and HIV through injection was quite high, the proportion of sharing needles was also high, meaning that knowledge on HIV has not yet been transferred to practice among IDUs. On the other hand, the percentage of correct answers to the questions about transmission of HIV by mosquito bites and sharing food – actually, these are UNGASS questions, was very low. This indicates that HIV information activities for IDUs should be improved. All the mentioned answers were consistent with those from a rapid assessment on HIV/STIs carried out in a treatment centre in Ankara among 10 IDUs in 2006. In the latter, the percentage of correct answers given to the questions on the transmission of HIV by mosquito bites and sharing food was 40.0% and 44.4% respectively (61).

Not knowing the infection status of HIV or HCV infection is also discussed as a risk factor for the transmission of those viruses among IDUs. Regardless of mode of transmission, HIV counselling and testing have been suggested as a tool to reduce risk practice (62). Amundsen et al. (2003) even claim that high level of HIV counselling and testing (to provide certainty about the HIV status) may be more effective in preventing HIV transmission among IDUs than the legal access to clean needles/syringes (63). In the United States, Marks et al. (2005) conducted a meta-analysis to compare the prevalence of high-risk sexual behaviours in HIV positive persons aware of their serostatus with the prevalence in HIV positive persons unaware of their status. They found that the prevalence of high-risk sexual behaviour was substantially reduced after people become aware that they are HIV positive. That is, why they concluded that increased emphasis on HIV testing and counselling is needed to reduce exposure to HIV from persons unaware their infection status (64).

The indiscriminate and frequent receptive sharing of injecting equipment and drug solutions by IDUs poses high risks for HIV when HIV infection is present in the drug-injecting network. Minimal interventions that rely on providing basic information to IDUs on HIV transmission can significantly influence risk behaviours. Given such information, many IDUs who share equipment adopt various strategies to reduce HIV risks: reducing indiscriminate sharing, sharing only with selected partners, not sharing when blood is in the syringe (65). In this study participants mentioned that they have been receiving information on HIV/AIDS from TV at 64.2%, newspapers (56.2%) followed by friends (32.7%) and Internet at 31.5%. The first source of HBV and HCV information is television (66.1%), followed by newspapers (57.1%), friends (41.6%) and internet (31.5%). None of the participants mentioned about receiving information and counselling from public institutions like hospitals or primary health care centres. Since ID use is a crime in most societies including Turkey, IDUs often avoid using general health services provided by public health institutions, even if it be receiving basic information. On the other hand, the fact that TV and newspapers are the primary source of information on HIV/AIDS, HBV and HCV demands reflection, because information on these infections is very limited in the media. Therefore, health services to be given to IDUs in public institutions need to be revised and IDUs both necessary information and counselling on HIV, HBV and HCV should be incorporated into services.

One of two questions on stigma and discrimination on HIV/AIDS was whether respondents would be willing to provide care at home to a relative infected with HIV. 70.8% said they would provide relatives with HIV infection care if they are very close. 6.0% said they would not, regardless of level of kinship. 1 IDU (0.6%) said yes, regardless of level of kinship. Herek et al. mentioned that one out of 5 US citizens was afraid of living with someone HIV (+) (66). In a study carried out in Eastern China 56% participants stated that they have not been willing to be a friend with someone HIV (+) and 73% mentioned that someone HIV (+) should be isolated from others (67). Comparing with these studies, it can be concluded that IDUs in Gaziantep study are not as discriminating towards people living with HIV.

The second question on stigma and discrimination was whether respondents would keep it secret if a family member were infected with HIV/AIDS. The majority of IDUs (67.9%) stated that they would rather not keep it a secret. Stigma due to HIV (+) status may result in neglect, denial, pessimism, depression and social withdrawal. Since the majority of IDUs are not willing to conceal it, lack of positive attitude to the humanistic dimension of HIV/AIDS may be the willingness not to hide of HIV status.

Past studies have established associations between IDUs and TB infection (68) investigations targeted to identify specific behaviours among IDUs that are placing them at elevated risk for TB. To explore knowledge of IDUs on TB 13 questions were included in the questionnaire. However, none of the respondents were able to answer all 13 or even 10 of the questions. Only 2 (1.2%) answered 9 questions correctly. The mean value of the answers of TB questions was 6.75 ± 1.9 , 0-9.

58% of IDUs responded correctly to the two medication adherence items. Knowledge regarding the importance of medication adherence was better and only 9.5% of subjects were weak in this area, which was motivating when compared with the study results (40%) carried out in a study by Wolfe et al. in New York City (17).

The knowledge gap was big for TB transmission. Only 1 IDU correctly answered all the questions and 120 correctly answered only two questions out of 5. This finding is consistent with those of Salomon et al. as well as Nyamathi et al. (18, 69) who reported that only 15% of 610 drug users engaging in a syringe exchange programme in New York could correctly answer questions related to TB transmission. And Durante et al. (70) found that participants in a drug treatment programme had widespread misconceptions about TB transmission, with many believing that TB could be prevented by bleaching needles or by not sharing drug paraphernalia. These data may suggest that IDUs may be paying selective attention to prevention messages related to HIV/AIDS and other blood borne diseases while relegating other important information to lower priority status. Programmes must become better at linking TB prevention messages to the context of injection drug users' lives and their drug use behaviour patterns, while at the same time remaining sensitive to issues of information overload.

52.4% IDUs stated correctly that a person with HIV infection or AIDS is at risk for developing tuberculosis. This is a low percentage comparing with the finding of Marinac et al (71) who reported that 74% out of 555 drug users mainly belonging to African-American minority groups. This higher finding might be due to high awareness of African-American people mainly living in a location where both HIV and TB infection rates are high.

No one among IDUs was aware of the problem of drug-resistant tuberculosis. This finding indicates that lack of tuberculosis-related knowledge is likely to be population-wide.

Chapter 6: Conclusion

This study aimed to assess knowledge, attitude and behaviours of IDUs in Gaziantep province on HIV/HBV/HCV and TB and look into the correlation between HIV/HBC/HCV serologies and PPD test results.

97% of IDUs are male, 2.6% of them are female and 0.6% are transvestites. 34.3% of them are at 25-29 and 31.3% at 30-34 age group. The youngest is 22 and the oldest is 45 years of age.

20.4% of the respondents were born in 79.6% were born out of Gaziantep.

Average monthly income is 2332.6 TL.

69 (41.1%) respondents have primary, 62 (36.9%) have secondary education. Only 1 respondents (0.6%) does not know how to read or write. Average period of education is 7.42 ($X \pm SD = 7.422 \pm 2.84$).

59.5% have alcohol more than once a week. 32.1% drink every day.

14.9% had history of imprisonment at least once. 8 of them (4.8%) lived on the streets for more than one week in the past 12 months.

62.5% smoke one or two pack of cigarette and 29.80% smoke more than two packs a day.

About the first drug used, 120 respondents (71.4%) answered cannabis. Average duration of using addictive drugs is 6.14 ± 3.12 (1-17). Average duration of using injecting drugs is 3.03 ± 1.94 (0.2-9.0). The injecting drug first used by 161 IDUs (95.8%) was heroin (without cocaine). Only 31 IDUs were using single drug.

In this study needle sharing was found in 68.5% of participants share needles and 57.1% reported that they have ever shared cookers/vials/containers or cotton/filters.

27.5% of respondents obtain new and unused injecting equipment from friends, 26.1% from dealers and 20.0%.

97.6% have had sex in the past 12 months. 71.4% used condom during last intercourse. 89.1% of respondents who used condoms reported that it was a joint decision. 70.8% who have sex with commercial partners reported using condoms during last intercourse.

99.4% of respondents have heard about HIV/AIDS and 97.6% have heard about HBV or HCV.

About knowledge level on HIV/AIDS, HBV and HCV, 91.6% provided correct answer to the question whether HIV prevention is possible for uninfected couples that do not have other sexual partners. 92.9% correctly answered the question about reduced risk in case condoms are used properly every time people have sex. 56.5% thought a healthy looking person may be infected with HIV. 5.4% think HIV is not transmitted with mosquito bites, 25.0% said HIV is not transmitted by sharing food with someone who is HIV (+). 82.7% provided with a correct answer to the question about HIV transmission from an infected pregnant woman to her unborn child.

75.0% reported that they have received HIV/AIDS education/counselling services. 128 respondents 76.2% received HBV and HCV education/counselling. Television is the first source of education for HIV/AIDS (64.2%) and HBV & HCV (66.1%) education. 70.8% said they would provide relatives with HIV infection care at home if they are very close. 10 (6.0%) said they would not, regardless of level of kinship. 1 IDU (0.6%) said yes, regardless of level of kinship. 38 (22.6%) of them do not know.

If a family member were infected with HIV, 24.4% would rather keep it secret while 67.9% would rather not. 7.7% do not have an idea.

None of the respondents that took part in the study was found to be HIV positive. On the other hand, 5 IDUs lead one to think of acute infection in window period for HBV. 67 IDUs have been found as susceptible for HBV while 64 were immune due to natural infection, 2 were immune due to vaccination, 9 of them were chronically infected and 20 IDUs have been either resolved from infection or were low level chronic infection. Moreover, 9 IDUs were HCV(+).

The correlation between the answer given to the question about possibility of HIV prevention in the case of uninfected couples that do not have sexual relations with others and level of education was not significant ($P > 0.01$). On the other hand, the correlation between education level and answers to questions about reduced HIV risk by using condoms during every intercourse, possibility of getting HIV by sharing food with someone with HIV and possibility of mother to baby HIV transmission during pregnancy was found to be significant.

The correlation between sharing injecting equipment and education level was significant ($X^2 = 11.7$; $P < 0.01$).

53.6% incorrectly thought that TB can be avoided by bleaching their needles or by not sharing needles. 2.4% of them thought that TB is not transmitted by sharing food. 2.4% thought that TB is not transmitted after eating at a restaurant where the cook has TB. Only 2 of them (1.2%) thought that TB is not transmitted by using public toilets. 92.3% thought that TB can be transmitted by working close to or living with someone who has TB and 90.5% stated that a person cured from TB can get the disease again.

52.4% thought that persons with HIV or AIDS are at increased risk for developing TB. None of them (0%) thinks that there is a new type of TB around that is not easily treated with available medicines. 91.1% of them recognized that drug therapy is available to cure tuberculosis. 89.9% stated that TB treatment is usually given in TB dispensaries and 85.7% mentioned that anti TB medications are available free of charge.

Of the participants who volunteered to be tested for PPD, 6 (11.3%) of them had PPDs results higher than 10 mm.

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Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
CSWs	Commercial sex workers
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
GD PHC	General Directorate of Primary Health Care
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
IDUs	Intravenous drug users
INBC	International Narcotics Control Board
IV	Intravenous
LSD	Lysergic acid diethylamide
MoH	Ministry of Health of Turkey
MDMA	Ecstasy
MDR	Multi drug resistance
MSMs	Men having sex with men
NEP	Needle exchange program
PPD	Purified protein derivative
SPSS	Statistical for Social Sciences for Windows
STIs	Sexually transmitted infections
TB	Tuberculosis
TUBIM	Turkey Monitoring Centre for Drugs and Drug Addiction
UNGASS	United Nations General Assembly Special Session
UNODC	United Nations Office on Drugs and Crime.
WHO	World Health Organisation

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8. Annex

A Serological and Behavioral Study on HIV, Hepatitis B, Hepatitis C and Tuberculosis among Intravenous Drug Users in Gaziantep 2009

Intravenous drug users (IDU) Behavioral Surveillance Questionnaire

	Province no	Organisation No
Participant No:		

Name of counsellor confirming the participation of participant	Name of counsellor	Signature
Date		

ATTENTION:

Please circle the appropriate answers on the below questions or filled the blank.

Section 1 – Background characteristics

101. Your sex?

1. Male
2. Female
3. Other

102. How old are you?

103. What is your occupation?

104. Your monthly income is around how many TL?

105. Where were you born?

106. What is the highest level of school you completed primary, secondary or higher?

Circle one.

1. Illiterate
2. Literate
3. Primary school
4. Secondary school
5. Higher
6. No response.....

107. Where do you live?

1.
2. I don't have any permanent residence.

108. How long have you been living in this city?

1. Sinceyrs
2. Less than a year.
3. I don't remember

109. In the last 12 months have you been away from your home more than one month altogether?

1. Yes
2. No
3. I don't know

110. What is your nationality?

1. Turkish
2. Other (Please specify) _____
3. Mixed (Which? Please specify) _____

111. During the past one month how often have you had drinks containing alcohol?

1. Never
2. Less than once a week or never
3. At least once a week
4. Every day
5. I don't know/remember

112. Have you ever been in prison?

1. Yes
2. No

113. Have you ever been homeless such as having living on the streets for more than one week in the last 12 months?

1. Yes
2. No

114. How many cigarettes do you smoke per day?

1. Never
2. Less than 1 package
3. 1-2 package
4. More than 2 packages

Section 2 – Drug usage

201. How long have you been using addictive drugs?

1. Number of years
2. Number of months
3. Less than a month

202. How long have you been injecting drugs?
1. Number of years
 2. Number of months
 3. Less than a month
203. Have you ever interrupted injecting drug?
1. Yes
 2. No (Skip to 205)
204. Why have you interrupted?
1. I was unable to afford
 2. I couldn't find any
 3. Due to police
 4. I have been detained
 5. I have decided to take a treatment
 6. Other
205. How old were you when you first injected drugs?
(Included self-injection or injection by another)
1. Age completed in years
 2. I don't know/remember
206. Which of the following types of drugs have you first used?
1. Cannabis
 2. Heroin (not in combination with cocaine)
 3. Cocaine (not in combination with heroine)
 4. Extasy
 5. Captagon
 6. Other
207. Which of the following types of drugs have you first injected?
1. Heroin (not in combination with cocaine)
 2. Cocaine (not in combination with heroine)
 3. Other.....
208. Which drug/s do you use now?
.....
209. When have you last injected drug?
1. Today
 2. Yesterday
 3. In the last 7 days
 4. In the last month
210. During the past one month how often have you injected drugs?
1. Only once
 2. 2-3 times
 3. Once a week
 4. 2-3 times a week
 5. Once a day
 6. More than once a day (how many times?)
 7. Don't know/remember

Section 3 – Sharing needle

301. The last month, think about the times you have injected drugs how often was it a needle or syringe that had previously used by someone else?
1. Always
 2. Most times
 3. Occasionally
 4. Never
 6. Don't know/remember

302. In the last one month, did you ever share needles and syringes with any of the following:

MULTIPLE ANSWERS ARE POSSIBLE.

1. Your usual sexual partner
2. A sexual partner who you didn't know
3. A close friend
4. A dealer
5. A professional injector
6. Someone in a shooting gallery
7. Other (Please specify) _____

303. In the last one month if you gave, lent, rented or sold a used needle or syringe, to whom you have done so? **MULTIPLE ANSWERS ARE POSSIBLE.**

1. Your usual sexual partner
2. A sexual partner who you didn't know
3. A close friend
4. A dealer
5. Someone that you don't know
6. Your friend from prison
7. Other (Please specify) _____
8. Don't know/remember
9. I haven't borrowed/rent/sold

304. How often do you clean syringe or needle?

1. Always
2. Most times
3. Occasionally
4. Never
5. Don't know/remember

305. How did you usually clean them?

1. Cold water
2. Hot water
3. Boiling
4. Bleach
5. Alcohol
6. Other (Please specify) _____
7. I don't know/remember
8. I don't clean

306. Can you obtain new, unused needles and syringes when you need them?

1. Yes
2. No

307. Do you know any person or place which you can obtain new, unused needles and syringes?

MULTIPLE ANSWERS ARE POSSIBLE.

1. Pharmacist
2. Drugstore
3. Health worker
4. Hospital
5. Family/relatives
6. Sexual partner
7. Friends
8. Other drug users
9. Drug dealer
10. Theft from legitimate source
11. Buy on streets
12. Other (Please specify) _____

308. In the past one month, did you every inject with a pre-filled syringe (by that I mean a syringe that was filled without your witnessing it)?

1. Yes
2. No
3. Don't know/remember
4. No response

309. In the past one month, how often did you inject drugs using a syringe after someone else had squirted drugs into it from his/her used syringe (frontloading/back loading/splitting)?

1. Always
2. Most times
3. Occasionally
4. Never
5. Don't know/remember
6. I haven't used drug

310. In the past one month, when you injected drugs, how often did you share a cooker/vial/container, cotton/filter, or rinse water?

1. Always
2. Most times
3. Occasionally
4. Never
5. Don't know/remember
6. I haven't used drug

311. Are you currently under treatment (or receiving help) or have you ever received treatment (or help) because of your drug use?

1. Currently under treatment
2. Was in treatment but not now
3. Have never received treatment
4. No response

Section 4 – Marriage and live-in partnerships

401. Are you currently married or living with a man/woman with whom you have a sexual relationship?

1. Currently married, living with a spouse
2. Currently married, living with other sexual partner
3. Currently married, not living with spouse or any other sexual partner
4. Not married, living with sexual partner
5. Not married, not living with sexual partner
6. No response

402. Has your partner/spouse other partner/spouse?

1. Yes
2. No
3. Don't know
4. I haven't married
5. I don't have currently any partner/spouse

Section 5 - Sexual history

501. Have you had sexual intercourse in the last 12 months?

1. Yes
2. No
3. Don't know
4. I haven't had any sexual intercourse.

Section 6 – Sexual history: Regular partners

601. Do you use condom having sexual intercourse with your regular partner/spouse?

1. Yes
2. No
3. I don't know/remember
4. I don't have any regular partner
5. I haven't had any sexual intercourse
6. I haven't heard about condom

602. The last time you had sex with a regular partner, did you use a condom?

1. Yes
2. No
3. I don't know/remember
4. I don't have any regular partner
5. I haven't had any sexual intercourse
6. I haven't heard about condom

603. Who suggested using a condom that time?

- 1) Myself
- 2) My partner
- 3) Joint decision
- 4) Don't know/remember
- 5) We haven't use condom
- 6) I haven't had any sexual intercourse
7. I haven't heard about condom

604. Why didn't you and your partner use a condom that time?

1. Not available
2. Too expensive
3. Partner objected
4. Don't like them
5. Used other protection
6. Didn't think it was necessary
7. Didn't think of it
8. Other
9. Don't know/remember
10. I haven't had any sexual intercourse
11. I haven't heard about condom

.....

701. In the last month have you had any sexual intercourse to exchange money or drugs?

If yes how many times?

1. Yes
2. No
3. I don't know/remember
4. I don't have any commercial partner
5. I haven't had any sexual intercourse
6. I haven't heard about condom

1. Myself
2. My partner
3. Joint decision
4. Don't know/remember
5. We haven't use condom
6. I haven't had any sexual intercourse
7. I haven't heard about condom

801. Have you ever heard of HIV or disease called AIDS?

802. Have you ever heard of Hepatitis B or Hepatitis C?

803. Can people protect themselves from HIV by using condom correctly every time they have sex?

804 Can the risk of HIV transmission be reduced by having sex with only one uninfected partner who has no other partners?

805. Can a person reduce the risk of getting HIV by using a condom every time they have sex?

806 Can a healthy-looking person have HIV?

807. Can a person get HIV from mosquito bites?

808 Can a person get HIV by sharing food with someone who is infected?

809 Can a person get HIV by getting injections with needle that was already used by someone else?

810 Can a person get Hepatitis B or C by getting injections with needle that was already used by someone else?

811. Can a pregnant woman infected with HIV transmit the virus to her unborn child?

812. Have you ever had an HIV test?

46

813. Did you find out the result of your HIV test?
1. Yes 2. No 3. Don't know

814. When did you last performed HIV test?

1.month before
2.year before
3. Don't know
4. Never being tested

815. Have you ever had Hepatit B vaccination?

- 1) Yes 2) No

If yes how many doses?.....

816. Have you ever had a Hepatitis B or C test?

1. Yes 2. No

If yes which of them? And when?

1. Hepatitis B 2. Hepatitis C 3. Both of them in.....

Section 9: Health services

901. Have you ever received training or counselling on HIV/AIDS?

1. Yes 2. No 3. Don't know

902. If so where you have received? **MULTIPLE ANSWERS ARE POSSIBLE.**

1. Hospital
2. Primary health care centre
3. Private clinic
4. Internet
5. Friend
6. TV
7. Journal
8. Other (please specify)
9. Don't remember

903. Have you ever received training or counselling on Hepatitis B or C?

1. Yes 2. No 3. Don't know

904. If so where you have received? **MULTIPLE ANSWERS ARE POSSIBLE.**

1. Hospital
2. Primary health care centre
3. Private clinic
4. Internet
5. Friend
6. TV
7. Journal
8. Other (please specify)
9. Don't remember

Section 10: Stigma and discrimination

1001. If a female/male relative of yours became ill with HIV, the virus that causes AIDS, would you be willing to care for her your household?

1. Yes
2. No
3. Don't know

1002. If a member of your family became ill with HIV, the virus that causes AIDS, would you want it to remain secret?

1. Yes 2. No 3. Don't know

Section 11: Tuberculosis (TB)

1101. Is there anyone diagnosed of TB around you among your friends or family?

1. Yes 2. No 3. No idea

1102. Have you had a productive coughing for at 3 weeks?

1. Yes 2. No 3. No idea

1103. You can stop taking TB medication when you stop feeling sick.

1. Yes 2. No 3. No idea

1104. If people don't take their TB medication as long as prescribed, it will be harder for them to be cured.

1. Yes 2. No 3. No idea

1105. Injecting drug users can keep from getting TB by bleaching their needles or by not sharing needles.

1. Yes 2. No 3. No idea

1106. TB can be transmitted by sharing food
1. Yes 2. No 3. No idea
1107. TB can be transmitted by eating at a restaurant where the cook has TB
1. Yes 2. No 3. No idea
1108. TB can be transmitted by using public toilets.
1. Yes 2. No 3. No idea
1109. TB can be transmitted by working near, living with someone who has tuberculosis.
1. Yes 2. No 3. No idea
1110. A person cured from TB can get the disease again
1. Yes 2. No 3. No idea
1111. Persons with HIV or AIDS, are at increased risk for developing tuberculosis
1. Yes 2. No 3. No idea
1112. There is a new kind of TB around that is not easily treated with available medicines.
1. Yes 2. No 3. No idea
1113. If someone has TB it can be treated pretty easily.
1. Yes 2. No 3. No idea
1114. TB medications can be stopped whenever a person starts feeling better
1. Yes 2. No 3. No idea
1115. AntiTB medications are available at no charge.
1. Yes 2. No 3. No idea

Thank you very much for your time and help.