

# Pattern of Cocaine and Heroin Abuse in a Sample of Iranian Population

Jamshid Ahmadi, Mehrdad Sharifi, Sadegh Mohagheghzadeh, G.Reza Dehbozorgi, Hassan Farashbandi, Masood Moosavinasab, Ali Firoozabadi, Saxby Pridmore, Cuneyt Evren, Samantha Busch and Sarah Farash

Department of Psychiatry, Shiraz University of Medical Sciences, Shiraz, Iran

Corresponding author: Jamshid Ahmadi, M. D., Jamshid Ahmadi, MD, P.O.Box 71345-1416, Shiraz, Iran  
E-mail: [jamshid\\_ahmadi@yahoo.com](mailto:jamshid_ahmadi@yahoo.com)

## Abstract

**Objective:** To assess the pattern of cocaine and heroin abuse in a sample of Iranian general population. **Methods:** Participants: 1400 subjects aged 15 years or older selected randomly in a household survey. Semi-structured interview by a questionnaire and a structured interview based on DSM-IV criteria for cocaine and heroin dependence and abuse. **Results:** The majority (35.9%) were in the age range of 15 to 24, 27.4% in 25 to 34, 17.6% in 35 to 44 and only 3.9% were older than 65 years. Of the subjects, 7 (0.5%) admitted the use of cocaine once or more during their lives [6 (0.9%) were men and 1 (0.1%) was a woman]. 2 (0.1%) were cocaine abuser [2 (0.3%) were men and none was woman]. 1 (0.07%) was cocaine dependent [1 (0.1%) was a man and there were no women]. The most common reason reported for initial cocaine use was curiosity, and for current use was seeking pleasure. Of the subjects, 39 (2.8%) admitted the use of heroin once or more during their lives [35 (5%) were men and 4 (0.6%) were women]. 8 (0.6%) were heroin occasional abusers [6 (0.9%) were men and 2 (0.3%) were women]. 22 (1.6%) were heroin dependent [18 (2.6%) were men and 4 (0.6%) were women]. Use of heroin was significantly related to gender. The most common reason reported for initial heroin use was curiosity, and for current use, seeking pleasure. **Conclusions:** This study could be considered for planning preventive and therapeutic governmental programs (*German J Psychiatry* 8(1); 2005: 1-4)

**Keywords:** Pattern of abuse, cocaine, heroin, general population

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## Introduction

To best of our knowledge, no scientific information has been published yet on cocaine abuse, and little has been reported on heroin or opium abuse, in Iran. Opium is widely used there for pleasure, as a painkiller, a hypnotic and for the treatment of premature ejaculation.

Drug abuse remains a crime in Iran, but the authorities are now willing for dependence to be treated as a psychiatric disorder. Substance abusers undergoing treatment are no longer prosecuted, nor are the specialists who treat them. Costs of treatment, medication and rehabilitation are paid by patients according to the approved tariffs, but the government will pay the costs for those unable to afford treatment (DCHQ, 1997).

Iranian drug policy states that the penalty for possession and use of all illegal substances is arrest and may be imprisonment. Alcohol is prohibited both by religion and law. Other abused illicit substances include heroin, cocaine, opium, stimulants, cannabis, LSD, and other hallucinogens.

The State Welfare Organization, which is affiliated to the Ministry of Health, Treatment, and Medical education, is in charge of treatment and rehabilitation of substance-dependent services. At the present time, there are 12 treatment and rehabilitation centres in Iran, with one centre specifically for women. Up until 1999 approximately 25,000 to 30,000 individuals were admitted to these centres (90% of these referrals were ordered by courts). The treatment was residential with an average stay of 2-6 months. The centres were described as having the infrastructure of an over-

crowded prison. Since that time outpatient treatment has been introduced and was initially based on detoxification with clonidine and tranquilizers, but more recently with naltrexone, buprenorphine or methadone. The usual duration of treatment is between 3 to 6 months, but on occasions it may be extended to 2 years. Treatment also includes individual therapy, family therapy, and group therapy. The average duration of out-patient treatment is between 3 to 6 months; however, patients can remain in treatment for up to 2 years. Relapse rates are estimated to vary between 60% and 80% depending upon the duration and centre. Self-referral centres such as Narcotic Anonymous have begun to develop across the country with as many as 5000 members (Razzaghi et al., 1999).

The number of current substance users in Iran ranges between 1.8 million to 3.3 million. The number of intravenous drug users is estimated around 200,000 to 300,000, of whom 1,841 suffer from HIV infection. Seventy-four point eight percent of the HIV infected population are intravenous drug users (Razzaghi et al. 1999; DCHQ 2001; Moor 2001).

Although Iran had been an important producing centre for opium for many centuries, it was not until 1955 that the country had its first laws against the cultivation and use of opium. Iran was a signatory to the 1961 Convention on Psychotropic substance. Up to present time, Iran has been an active member of the United Nation Commission on Narcotic drugs in the Near and Middle East.

Despite the international control and treatment policies in operation, drug addiction continues to be important in Iran. In 1974, the National Iranian Society for the Rehabilitation of the disabled received substantial funding and assumed full responsibility to implement drug treatment programs. Although they worked to improved inpatient facilities, only a small proportion of substance abuse population received treatment. Subsequently a major detoxification program was launched throughout Iran, placing a greater emphasis on outpatient treatment. Between 1974 and 1977, the National Iranian Society for the Rehabilitation of the Disabled opened several rehabilitation centres throughout the country to provide outpatient treatment to 30,000 addicts (Agahi & Spencer, 1981). There is little data published about the success of this rehabilitation program.

Most of the research on drug abuse in pre-revolutionary Iran is confined to studies of registered addicts in clinical settings, and young and nonregistered drug users were not included in these studies. From these limited sources it is evident that opium has always been the most widely abused drug in Iran. However, the pattern has diversified with rapid growth of Iranian cities, population movement, and general economic change. Opioids, hallucinogens and hypnotics were all reported as drugs of abuse among the clinical population studies. Alcohol use also increased substantially in the later pre-revolution years (Agahi & Spencer, 1981).

The first official estimate of the size of the drug problem was made in 1950; it claimed that approximately 7% of the total population was dependent upon opium (Agahi & Spencer, 1981). In the following decades, the official drive against drug production and consumption reduced the scale of the traditional opiate use pattern. Long-term opium de-

pendents were registered and maintained, but evidence indicates that these authorized users became some of the major opium suppliers. "Westernization" of the drug abuse pattern and diversity of substances used occurred with the rapid economic and social change of the 1970s due to the increase in oil prices.

In the Islamic Revolution of 1979 a religiously led government replaced the Shah government, and the changes affected almost every aspect of public life. Many of policies of the previous administration were altered or even reversed because they were considered non-Islamic. Consequently, the Iranian drug policy changed as well, and the National Iranian Society for the Rehabilitation of the disabled ceased to be in charge of drug treatment in the country.

Subsequently, the new regime passed laws to limit the cultivation and distribution of opium. These laws also started a new national campaign against drug abuse, and alcohol became the prime target of new regulations. During the early months of 1980, the campaign became much stricter with extensive use of the death penalty for drug trafficking.

Two studies from this period indicate the severity of the problem at this early stage of the revolution. Dalvand interviewed 200 newly registered addicts at the rehabilitation centre in Shiraz (Dalvand et al. 1984), and Agahi surveyed a sample of the Isfahan adolescents (Agahi & Spencer, 1982a).

Initial studies showed that after the revolution, a broader social range of patients attended the clinics including individuals who were addicted to drugs for years. Urban residents predominately used heroin while villagers typically used opium.

The model age of initiation has remained stable in Iran for many years. Nearly 80% of the sample, whether recent or long stabilized users, began regular drug use in their 20s or later. Studies of western countries drug use of the equivalent percentage of late starters is much lower (Agahi & Spencer, 1982c). In another survey of the adolescent population, 11% claimed they never used drugs. Opium predominated drug abuse in Iran, and hashish and heroin were the only other drugs mentioned (Agahi & Spencer, 1982c). Among drug experimenting adolescents, drug use was not associated with social deprivation, and drug users were not overrepresented in low socio-economic individuals. Youth drug use was not an expression of an adolescent counterculture (Agahi & Spencer, 1982b). Cigarette use, in contrast was predicted more by peer smoking rates than family smoking patterns (Agahi & Spencer, 1982b).

After the above-mentioned studies, there were few reported empirical studies conducted in Iran. Official press announcements are the only indication of the extent and success of the drug campaign. The war with Iraq had significant effects on the country's economy and social order. It appears as if other aspects of Iranian life also experience repercussions of the war. Therefore, baseline data on opiate addiction such as drug use motivation to provide guidance for policy makers on prevention, treatment, and education programs.

The majority of the Iranian population are below 25 years (about 60%), and a large portion of this population are stu-

dents. In a study investigating the rate of substance use in Iranian senior high school students, 14% of boys reported using cigarettes, and 5.7% of students currently used other substances (Moosavi, 2000). In a study of substance abuse among Iranian university students, 24% of the students reported at least one incident of drug use in their lifetimes. The rate of substance use is more prominent in the male population (Merchant et al., 1976).

This paper assessed the pattern of cocaine and heroin use in the Iranian city of Shiraz.

## Materials and Methods

### Subjects

As a sample representing the general urban population in Shiraz, Iran, we selected 1500 subjects (men and women) on a multi-stage probability sample of people aged 15 years and older, from Shiraz city, the capital of the Fars Province, with a population of nearly 1.5 million. The subjects were selected by area and cluster random sampling. We divided Shiraz city into 15 geographic areas. One cluster (each cluster included 100 subjects) was selected randomly from each area. Overall 15 clusters were selected from different regions in Shiraz to have a sample representing different socioeconomic statuses. Of the 1500 subjects, we excluded 100 subjects due to incomplete questionnaire completion or lack of participation in the study. The overall response rate was 93.3% with 1400 participants (700 men and 700 women). Of the participants, 50% were men (mean age=34.61, SD=14.06, age range=15 to 80 years) and 50% were women (mean age = 30.99, SD=12.90, age range=15 to 83 years),  $t = 5.0$ ,  $DF=1398$ ,  $P<0.001$ . Considering the age distribution of the subjects, the majority (35.9%) were in the age range of 15 to 24, 27.4% in 25 to 34, 17.6% in 35 to 44 and only 3.9% were older than 65 years.

### Procedure

The data were collected from 1400 subjects using a semi-structured interview and a structured interview based on DSM-IV criteria for cocaine and heroin abuse and dependence. An explanation of the study and an assurance of confidentiality were given. All respondents freely agreed to participate.

Interviews (face to face) were performed in the homes of the subjects (all individuals aged 15 years or older including spouse, wife, and offspring). The semi-structured interview included questions on age, gender, marital status of the subjects and the use of cocaine or heroin in the past or currently. The research also attempted to identify reasons (habit, avoidance of withdrawal, pleasure, tension, depression, other) for cocaine or heroin use.

## Statistical Analysis

Data analysis was carried out using SPSS for Windows (version 11.5) program. A chi-square test was used to test the frequencies between groups and two-sided t tests were used for comparing the means between groups.

## Results and Discussion

Of the subjects, 7 (0.5%) admitted the use of cocaine once or more during their lives [6 (0.9%) were men and 1 (0.14%) was a woman,  $\chi^2 = 3.59$ ,  $df = 1$ ,  $p = 0.058$ ]. 2 (0.14%) were cocaine abuser [2 (0.3%) were men and there were no women,  $\chi^2 = 2$ ,  $df = 1$ ,  $p = 0.16$ ]. 1(0.07%) was cocaine dependent [1 (0.14%) was a man and there were no women,  $\chi^2 = 1$ ,  $df = 1$ ,  $p = 0.32$ ]. The most common reason reported for initial cocaine use was curiosity, and for current use was seeking pleasure. The low rate of cocaine use is most probably due to very low availability of cocaine in Iran; however, there may have been some underreporting.

Of the subjects, 39 (2.8%) admitted the use of heroin once or more during their lives [35 (5%) were men and 4 (0.6%) were women,  $\chi^2 = 25.35$ ,  $df = 1$ ,  $P < 0.00001$ ]. 8 (0.6%) were heroin abuser [6 (0.9%) were men and 2 (0.3%) were women,  $\chi^2 = 2$ ,  $df = 1$ ,  $P = 0.16$ ]. 22 (1.6%) were heroin dependent [18 (2.6%) were men and 4 (0.6%) were women,  $\chi^2 = 9.1$ ,  $df = 1$ ,  $P < 0.003$ ]. Use of heroin was significantly related to gender. The most common reason reported for initial heroin use was curiosity, and for current use was seeking pleasure.

Substance use was found to be significantly higher in men than women. This is in contrast with studies conducted in the West showing that lifetime use did not vary significantly by sex (Gulliver et al., 1997). It should be noted that in Iran, most of the time, women are socially down graded if they smoke or drink.

One of the major limitations of the study is that the findings cannot be generalized to the Iranian population, due to the restricted location of the sample. These results can be considered when planning preventive programs such as advertisements and teaching programs; and also therapeutic programs such as Self-identified Centres and anonymous groups.

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## References

- Agahi C, Spencer CP (1981) Drug abuse in pre-Revolutionary Iran *Journal of psychoactive Drugs*, 13: 39-46.
- Agahi C, Spencer CP (1982c) Beliefs and opinion about drugs and their users as predictors of drug user status of adolescents in post revolutionary Iran *drug and alcohol dependence*; 10: 99-110.
- Agahi C., Spencer CP (1982b) Social background personal relationships and self-description as predictor of drug users status: A study of adolescent in post revolutionary Iran *drug and alcohol dependence*: 10: 77-84.
- Agahi C, Spencer CP (1982c) Patterns of drug use among secondary school children in post- revolutionary Iran. *drug and alcohol dependence*: 9, 235-242.
- American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders*, 4 th edition. Washington, DC, American Psychiatric Association
- Coleman, E. A. Honeycutt, G. Ogden, B. McMillan, D. E. O'Sullivan, P. S. Light, K. Wing field, W. (1997). Assessing substance abuse among health care students and the efficacy of educational interventions. *Journal of Professional Nurse*, 13 (1) 28-37.
- Dalvand S, Agahi C, Spencer CP (1984) Drug addicts seeking treatment after the Iranian revolutionary Iran: A clinic-based study. *Drug and Alcohol Dependence*; 14: 87-92
- Drug Control Headquarters (1997) *The Anti Narcotics law of the Islamic Republic of Iran (as amended November 1997)*. Drug Control Headquarters.Tehran.Iran [[www.chr.asn.au/freestyler/gui/files/Iran](http://www.chr.asn.au/freestyler/gui/files/Iran)]
- Drug Control Headquarters, International Relations Office (2001) *The National Drug Control Report-2000*. Drug Control Headquarters. Tehran, Islamic Republic of Iran.
- Gulliver, S. B. Kalman, D. Rohsenow, D. J (2000) Smoking and drinking among alcoholics in treatment: cross-sectional and longitudinal relationships. *Journal of stud-Alcohol* 61 (1): 157 – 163.
- Merchant, N. M. pournadeali, E. Zimmer, S. P. Ronaghy H. A. (1976). Factors related to drug abuse among Iranian university students. *Pahlavi Medical Journal* 7(4) 516 – 528.
- Moore, M. (2001) Iran: once hidden, drug addiction is changing Iran. *Washington Post (DC)*. Wednesday 18 July. P 26. [[www.chr.asn.au/freestyler/gui/files/Iran](http://www.chr.asn.au/freestyler/gui/files/Iran)]
- Moosavi, G. (2000) Substance use among Iranian high school students. Paper presented at the Fourth Iranian Seminar on Children and Adolescents Mental Health, Zanjan, Iran, 18–20 October. [<http://www.gjpsy.uni-goettingen.de/gjp-article-ahmadi-substance-school.pdf>]
- Razzaghi, E. Rahimi, A. Hosseini, M. & Chatterjee A. (1999) “Rapid Situation Assessment (RSA) of Drug Abuse in Iran” prevention Department, State Welfare Organization, Ministry of Health, I.R. of Iran and United Nations International Drug Control Program.