Analysis of Substance Use by Primary School Students

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Abstract

Background: Substance use reduces academic achievements of students. The goal of this study was to investigate the prevalence of substance use in primary school students. Method: A representative sample of 1034 boy students were selected randomly from primary schools in Shiraz city located in Southern Iran. A confidential questionnaire based on DSM-IV and a prior study was distributed, completed by the students and collected in the same sessions. Findings: Mean age of the sample was 11.2 year (SD: 1.0, age range: 9-15). Of the subjects 233 (22.5%) admitted smoking of cigarettes, and 6 (0.6%) reported use of opioids, once or more during their lives. Fifty (4.8%) reported occasional cigarette smoking, and 2 (0.2%) reported occasional use of opioids. Thirty-nine (3.8%) reported current cigarette smoking, and 1 (0.1%) reported current use of opioids. Some were using more than one substance. Mean age of current substance users was significantly higher than the remainder. The most common motivation for first use of substance was curiosity and for current use of substance was habit. Conclusions: These results can be useful for preventive and therapeutic programs, because early intervention during the formative school years may present an opportunity to reduce the risk of long-term problems, to decrease social and individual harm, and also to promote public health of society (German J Psychiatry 2003; 3: 56-59).

Keywords: Substance use, nicotine, opioids, primary school

Introduction

Substance use can decrease academic achievement of students; therefore, authorities should be able to investigate the extent of the problem, understand the contributing factors, recognize signs and symptoms, and use educational interventions in identifying and preventing substance dependency (Coleman, et al., 1997).

Substance use disorders are among the most common mental disorders in Iran. Although in developed countries a reduction in opioid use can be observed, in developing nations it is still increasing.

The majority of the research studies on substance abuse in pre-revolutionary Iran are confined to studies of registered addicts in clinical settings, and there were no studies of young or other nonregistered users. 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 Islamic Revolution in 1979 made alcohol a prime target and provided a new national campaign against drug abuse. 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 nature of the problem at this early stage of the revolution. Dalvand interviewed 200 newly registered addicts at the rehabilitation center in the major provincial capital of Shiraz

(Dalvand, Agahi & Spencer, 1984), and Agahi studied a sample of the adolescents of Isfahan (Agahi & Spencer, 1982,A). The first study showed that after the revolution the clinics were experiencing a broader social range of addicts than before and that action by the authorities was bringing many recently addicted individuals to clinics. Heroin use predominated among those who were urban residents, whereas villagers attending the clinics were more likely to be opium users.

One aspect of the pattern, which would seem to have remained stable in Iran for many years, was the model age of initiation. Nearly 80% of the sample, whether recent or long stabilized users, had started to use drugs regularly in their 20s or later, whereas in many western studies the equivalent percentage of late starters is much lower (Agahi & Spencer, 1982c). In another study of the adolescent population, 11% claimed to have ever used any drug. Opium predominated with hashish and heroin the only other two drugs mentioned (Agahi & Spencer, 1982a). Among drug experimenting adolescents, drug use did not seem to be associated with social deprivation as drug users were not overrepresented among those from the most deprived social backgrounds, nor was it an expression of an adolescent counterculture as most young drug users had been introduced to the drug within family setting, rather than as a result of encouragement from peers (Agahi & Spencer, 1982b). Cigarette use, in contrast was predicted more by peer than family smoking patterns (Agahi & Spencer, 1982c).

As mentioned before limited information is available on the epidemiology of substance use in the Iranian student population. A research study showed that 24% of college students used substance at some time in their lives (tobacco was not considered). Hashish was the most frequently used substance (Merchant, et al., 1976). In a recent study assessing substance dependency among senior high school students, 14% of boys reported currently using tobacco and 5.7% using other substances (Moosavi, 2000).

Iranian drug policy states that the penalties for possession and use of all illegal substances are arrest and imprisonment. However, there are not any scientific research studies that this had led to a decrease of using these drugs. Alcohol is both religiously and legally prohibited. Illicit substances are alcohol, heroin, opium, cannabis, stimulants, LSD, and other hallucinogens.

To our knowledge there is no published paper using international criteria for substance use disorders among students of primary school in Iran; therefore it is of interest to evaluate substance use disorders in this population. This paper attempts to identify the prevalence of substance use in an Iranian student population and to investigate the epidemiological characteristics of substance users in primary schools in Shiraz city, which is a large city in south Iran.

Materials and Methods

Subjects

This sample can be said to represent the student population at Shiraz city. One thousand and fifty (1050) boy primary school students on a stratified, multi-stage probability sample were selected from all primary schools in Shiraz city to represent all socioeconomic levels. Shiraz is a large city and the capital of Fars Province with a population of about one and half millions and is located in southern part of Iran. Sixteen questionnaires were excluded from the study due to refusal of responding, incomplete questionnaires, etc. The characteristics of the excluded subjects were not significantly different from other subjects. The overall response rate was 98.48% with 1034 participants. Their mean age was 11.15 year (SD: 0.97, age range: 9-15).

Procedure

A questionnaire, based on DSM-IV criteria for substance dependence (American Psychiatric Association, 1994) and a prior study (Mckay, Hawthorne, and McCartney, 1973) was distributed, completed by the subjects, and collected in the same session. Informed consent was discussed with all the subjects. An explanation of the reasons for the research and also an assurance of confidentiality were given. The students were asked to complete and return the questionnaire. It included a number of questions on age, sex, marital and whether or not they used any psychoactive substance, particularly illicit substances (alcohol, opium, heroin, cocaine, cannabis, psychedelics) in the past or currently (current substance dependent) The study also intended to identify motivations/reasons (pleasure, tension, depression, imitation, habit), and other) for drug use.

Statistical analyses

Analysis included both descriptive statistics and inference statistical procedures. The SPSS for windows was used for data analysis. Student t-test analyses were used to test for differences in means. These were two-tailed with p<0.05.

Results

All of the students were boy and single. The mean ages were 11.44 for ever users, 11.60 for occasional users, and 11.57 for current users. The mean age for current substance users (11.57, SD=0. 95) was significantly higher than the remainder (11.12, SD=0.96; t=3.79, df=1032, P=0.000). Approximately 278 (26.9) were 10 years or younger, 420 (40.6%) were 11 years, 263 (25.4%) were 12 years, and 73 (7.1%) were 13 years or older.

Table 1. Number of Subjects who Reported Usage of Substance. Respondents Were Allowed to Mark More Than One Substance

Substance	Ever Used		Occasional Use		Current Use	
	N	%	N	%	N	%
Alcohol	139	13.4	34	3.3	28	2.7
Tobacco	233	22.5	50	4.8	39	3.8
Opium	6	0.6	2	0.2	1	0.1
Heroin	1	0.1	0	0.0	0	0.0
Total	318	30.3	86	8.3	48	4.6

Seven hundred and sixteen (69.3%) never experienced any substance, 259 (25%) reported experience with only one substance, and 59 (5.7) reported experience with more than one substance.

Table 1 shows the subjects who reported use of each substance once or more sometime in their lives, those who reported occasional substance use, and those who reported current substance dependence. Three hundred and eighteen (30.7%) reported having used at least one substance, sometime during their lives, and 48 (4.6%) reported current substance dependence. Cigarette was the most prevalent substance used in ever users, occasional users, and current users.

The most common motivation for use of substance was curiosity in ever users, seeking pleasure in occasional users, and habit in current users (Table 2).

Discussion

Cigarettes were found to be the most prevalent from of used substance among Iranian students, in comparison to alcohol which was the most widely used substance among Western students (Kory and Crandall. 1984). Only cigarettes, alcohol, and opioids were reported as used substances. There was no report of using cannabis, stimulants, cocaine, LSD or other hallucinogens. It should be noted that, in Iran it is very difficult to obtain cocaine, or psychedelics.

Only 48 (4.6%) students were current substance dependent. It should be noted that public admission of substance use (excluding cigarettes) might result in his or her dismissal from the school; therefore there may be possibility of under-reporting. It should be noted that Iranian drug policy states that people would be arrested and may be imprisoned for possession and using of illicit substances.

Several possible limitations that could have affected the results should be mentioned in this research study. Underreporting of substance use is a common problem in substance epidemiological surveys. Therefore, the true prevalence of substance use disorders could be higher than that reported in this study. Another problem that should be considered is limitation of this study to Shiraz primary schools. Therefore care must be taken not to generalize these findings to the full Iranian student population.

Conclusions

The findings of this research can be considered when planning for preventive and therapeutic programs, because early intervention during the formative school years can present an opportunity to reduce the risk of long-term substance using problems, to decrease social and individual harm, and also to promote public health of society.

Acknowledgements

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Table 2. Reasons for Subjects Who Reported Usage of Substances. Respondents Were Allowed to Mark More Than One Substance. ‚Other' - Reasons Such as Insomnia, Pain, and ‚to Show Manliness'

Reason	Ever Used		Occasional user		Current user	
	N	%	N	%	N	%
Curiosity	124	12.0	0.0	0.0	0.0	0.0
Imitation	27	2.6	0.0	0.0	0.0	0.0
Habit	0.0	0.0	14	1.4	26	2.5
Pleasurable Purposes	79	7.6	35	3.4	18	1.7
Release of Tension	32	3.1	9	0.9	13	1.3
Depression	7	0.7	2	0.2	3	0.3
Other	43	4.2	13	1.3	9	0.9

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