Original Article

Prevalence of Substance Abuse among High School Students in 2015-2016 Academic Year in Yazd city, Iran

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Abstract

Introduction: Substance abuse is a common problem and a major public health dilemma with a high incidence of morbidity and mortality. Therefore, due to the increase of drug abuse in recent years, especially among young people and its complications, including loss of life, unwanted pregnancy, suicide commitment, as well as violence and given that our country has a young population, so the present study, aimed to investigate the substance abuse among the students in Yazd, a central city in Iran.

Materials and Methods: In this cross sectional study 1020 students studying in high school (the first period - the second period) were investigated in the 2015-2016 academic year in the city of Yazd. Multi-stage sampling method using cluster and stratified sampling was used. Information were collected through a standardized questionnaire based on World Health Organization method known as Global school-based student health survey (GSHS) which was translated to Persian. After completion of the questionnaire by students, the collected data were analyzed by SPSS software version 16 and through statistical tests of significance.

Results: The results showed 18.1% of students had at least one history of drug use. 9.5% of students had a history of cannabis use, 12.5% had a history of amphetamines use, 10.8% had a history of taking psychotropic pills, 12.2% had a history of heroin use, 12.9% had a history of opium use, and finally, 9.6% had a history of crack use. There was no significant association between parents education and drug abuse in students.

Conclusion: According to high prevalence and diversity of substance abuse among students, recommend educational program in school and parents supervision. Promotion of parents and teachers knowledge about symptoms of abuse is needed. Family support of adolescents is effective for prevention.

Key Words: Substance abuse, Students, GSHS questionnaire

Abbreviations: GSHS: Global School Based Student Health Survey

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Introduction

Substance abuse is a common problem and a major public health dilemma with a high incidence of morbidity and mortality. Drug abuse is a phenomenon which damages the physical health, family and social relations, as well as economical status and may severely reduces all individual and social functions of affected person. For the first time in human history, we are faced with an epidemic that undermines the foundations of human society and its prevention requires application of multiple theories in various scientific disciplines [1]. According to the 2005-2006 statistics, about 7-10% of the population aged 12 years and older in the United States was involved in alcohol or drugs abuse. The frequency of men consumers was two times more than the women consumers [2].The diffusion rate of drug abuse among young people has been reported to be higher than any other age group. In particular, drug abuse rose during the 1960s and 1970s, while use of banned drugs among the youth, mainly students has increased since 1992 [3]. According to the estimations, more than 49%of students in America have used banned drugs before finishing their high school education. The highest rate of drug abuse was detected in the age range of 19 to 24 years [4]. Application of banned drugs by young people correlates directly with reduced life expectancy, accidents, unwanted pregnancy, as well as committing suicide and violence. Proper planning and carrying out scientific interventions to prevent abuse of banned drugs is essential [5]. Prevention from exposure or make a reduction in youth's desire to the substances is an efficient approach to prevent drug abuse in the community. There are three main approaches to fight with this disaster[1] elimination of pathogens or drug combination, [2] environmental control for spread of drug ingredients, [3] enhance the refusal ability of youth in the case of dealing with the drugs[6].

A study conducted in 2005 in 10 Regions of Tehran showed that 6.9% of the students had a positive test for morphine and cannabis metabolite. The pressure from peers was also reported as one of the main determinants of drug use among the evaluated students [7]. Studies conducted in Turkey on 1720 students showed that 63.3% of students have tried to test drug use and 48.5% had a history of drug use[8].

Additionally, in another study carried out in the city of Najaf Abad, the prevalence of drug use among students was estimated as 5.7% while the consumption rate in boys was higher than girls[9].

Therefore, due to the increase of drug abuse among young people in recent years and its complications of ruining a person's life and family and given that our country has a young population, the current study targeted at determining the status of substance abuse and its association with parental education among the students of Yazd city, Iran.

Materials and Methods

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This is a cross-sectional study which conducted on the statistical society consisting of all male students studying in high school level in the city of Yazd in the educational year 2015-2016.

Sample selection was done through multi-stage cluster and stratified sampling method. Statistical society was stratified in two educational districts and also by level of education (first or second). Clusters are determined at the school levels and 25 students were estimated as the size of each cluster. The sample size was calculated 1000 according to the frequency of drug abuse in students in previous studies [9] about 10 percent, confidence level 95% , margin of error 2.3% and cluster coefficient 1.5. It means 40 clusters of 25 students in which every school classes were considered as a cluster and all students in that class were entered to the study. We obtained the list of all high schools and select randomly 10 schools in each statistical zone. One class of middle grade was select randomly in each school.

The data collection instrument was a standardized questionnaire based on World Health Organization method known as Global school-based student health survey (GSHS) which was translated to Persian. To ensure the accuracy of the translated questionnaire, its content was checked after it was translated into English once again[10]. validity and reliability of this questionnaire was measured in the same article [10]. The questionnaire contains 33 questions (core and expanded) about drug and psychotropic substances abuse was completed by the student. The questionnaires had not been identified by the student's name but by an identification code instead. The collected data were then analyzed by SPSS software version 16 and statistical tests of significance including Chi Square were conducted. In all cases the significant level were considered as 0.05.

Results

In this study 1020 male students were enrolled in two educational districts of Yazd. The results showed that most of students were in the age range of 14-15 when they first used drugs (table 1).

Further, the results showed that students' use of drugs had the following frequencies: at least one drug 18.1%, amphetamines 12.5%, heroin 12.2%, opium 12.9%, psychotropic (ecstasy) pills 10.8%, crack 9.6%, and cannabis 9.5%. The correlation between drug use and parental education level is represented in table 2. It indicates that substance abuse does not have a significant relationship with parent educational level (P-value>0.05). There was not significant correlation between substance abuse and parental education level according to the type of drugs (table2).

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Table1. The frequency of drug abuse among students in terms of onset age

Age of Onset	Drug abuse	
	Number	Percent
Abstinence	784	76.9
7 years ≥	25	2.5
8-9 years	18	1.8
10-11 years	20	2
12-13 years	14	1.4
14-15 years	29	2.8
16-17 years	22	2.2

Table2. Summary results of drug abuse by parental education level among the students

	Education level of parental	Type of drugs (%)						Any drug abuse
		Amphetamines (%)	Heroin (%)	Opium (%)	Psycho.* (%)	Crack (%)	Cannabis (%)	
Father	Primary school (n=160)	12 (7.3)	12 (7.6)	17 (10.3)	11 (6.8)	14 (8.4)	10 (6.2)	25 (15.6)
	Middle school (n=178)	31 (16.9)	24 (13.8)	24 (13.7)	19 (10.6)	14 (8.1)	20 (11.3)	44 (24.7)
	High school (n=243)	27 (11.2)	27 (11.1)	29 (12)	22 (9.1)	19 (7.8)	15 (6.2)	43 (17.7)
	University (n=332)	35 (10.5)	37 (11.1)	37 (11.1)	35 (10.7)	31 (9.3)	33 (10)	54 (16.3)
	P value	0.050	0.837	0.829	0.630	0.633	0.559	0.081
Mother	Primary school (n=231)	30 (13.2)	24 (10.3)	32 (14)	27 (11.1)	20 (8.9)	19 (8.4)	45 (19.5)
	Middle school (n=174)	16 (9.5)	10 (5.9)	14 (8.3)	9 (5.1)	9 (5.2)	9 (5.1)	30 (17.2)
	High school (n=247)	26 (10.5)	32 (13.1)	30 (12.2)	26 (10.7)	25 (10)	21 (8.4)	42 (17)
	University (n=254)	30 (12)	33 (13.1)	28 (11.2)	26 (10.2)	25 (9.7)	26 (10.3)	46 (18.1)
	P value	0.511	0.059	0.176	0.249	0.310	0.650	0.912

*Psychotropic pills(Ecstasy)

Discussion

The purpose of this study was to investigate drugs abuse in students of Yazd. The results of this study showed that 18.1% of students in Yazd abuse drugs and the maximum age for drug use onset was 14-15 years. Given that

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students of this age range are psychologically at the crisis of puberty and thus strongly influenced by the environment and their friends; it can be concluded that bad friends are the main cause of substance use in this age group. Verdi Pour et al., reported that the prevalence of derivatives morphine and cannabis among students in 10 districts of Tehran was 6.9%. Compared with the findings of this study it can be concluded that the level of drug use among students in Yazd province is more than inordinate [7].

The results on type of most frequently used substances for at least one drug application was 18.1% and for other types were as following; amphetamines 12.5%, heroin 12.2%, opium 12.9%, psychotropic (ecstasy) pills 10.8%, crack 9.6%, and cannabis 9.5%. Ozgar and colleagues reported that 63.3% of students in Turkey have been trying to test drug use and 48.5% had a history of drug application. The comparison of these findings with findings of the current study showed that the rate of alcohol use among students in Turkey is extremely high. In Yazd province a lower incidence of drug use among residents can be attributed to their believes [8]. Findings of the study conducted by Mousavi et al., showed that the prevalence of drug use among students in the city of Najaf Abad was 5.7%, these findings comparing with the findings of our study had a lower frequency. But drug consumption in Najaf Abad in comparison with Yazd is highly relative to its population(9). Alaei et al. carried out a study on students in the city of Karaj. They concluded that 57% of students have had at least one experience of substance use, including tobacco, hookah, or other substances in their lifetime which is a higher prevalence in comparison with this study. In addition, the findings based on the type of drugs showed that the highest intake was related to ecstasy, opium, cannabis, crystal, crack, and heroin, respectively. These findings are a bit different from findings of this study which reported amphetamines, opium, and heroin as the most frequently used substances [11].The findings of Qavidel et al., showed that 24.5% of students in NazarAbad city had a history of drug use at least once during their life including tobacco, alcohol, heroin, crack, cannabis, etc. Excluding tobacco and alcohol, our findings showed that drug abuse in Yazd was higher than NazarAbad [12].

This study suffered from the following limitations; possible lack of sincere cooperation in responding to questions and 10-15% did not respond to some questions knowing that their response will have a negative feedback on them. We also did not have access to young dropouts as they might have higher rates of substance use, so our findings cannot be generalized to this age group, it is specific to school children.

Conclusion

Given the high prevalence of drug use among students, people's awareness can be raised through mass media and social networks to reduce the incidence. Considering the onset and prevalence of drug use in adolescence and adulthood and by taking into account the fact

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that students spend most of their times with their friends, substance application can be reduced by more proper parental supervision and identification of their friends.

Acknowledgment

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Conflict of Interest

None .

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