



Research Article

ISSN : 2277-3657
CODEN(USA) : IJPRPM

Effective factors of addiction relapse among self-introducing addicts to drug addiction-quitting centers in Khuzestan Province, Iran; 2015

Iraj Nazari¹, Farkhondeh Jamshidi^{2*}, Zahra Rahimi³ and Maria Cheraghi⁴

¹Associate Professor, Department of Surgery, School of Medicine, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

²Associate Professor, Social Determinate of Health Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

³Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

⁴Associated Professor, Social Determinat of Health Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

*Email: epidemiology2015@gmail.com

ABSTRACT

It was aimed to determine the effective factors of addiction relapse in Khuzestan province. It was a cross-sectional descriptive and analytic study which has performed on 4,400 addicts from March, 2014 to March, 2015. All subjects have divided in two groups: with history of addiction relapse (Group I) and without history of addiction relapse (Group II). The structure questionnaire was completed in a self-filled manner after obtaining the consent form. Data has analyzed by SPSS v20. Mean and standard deviation were calculated for continuous variables and the frequency and percentage frequency were calculated for nominal and classified variables, and also t-test, chi-square and ANOVA were used to examine the relationships between the variables. The level of significance was set at 0.05. In the first group (addiction relapse), 2844 people (97.6%) of 4,400 participants in this study were male and 70 people (2.4%) were women and in the second group (going for addiction treatment for the first time), 1383 people (97.3%) were men and 39 people (2.7%) were women. The average age in the first group was significantly higher than it in the second group. In terms of marital status, in both groups, the most frequency, that was higher in the addiction relapse group, was for married people. In both groups, the majority of subject were workers and the frequency of unemployment in the addiction relapse group was higher. In the addiction relapse group, the average age of onset of drug consumption was lower. The highest relative frequency of consumables, in both groups, was opium and the consuming of synthetic drugs in addiction relapse group was higher. In both groups, smoking was the dominant mode of drug consumption and also in the addiction relapse group, the number of injections was reported more than it in the other group. Enjoyment and family problems were reported as the primary and secondary motivation of drug consumption respectively. In the first group, the frequency of family problems was higher. In terms of occupation ($P=0.002$), marital status ($P<0.001$), average age ($P<0.001$), and the average age of onset of drug consumption variable ($P=0.03$), no significant difference was observed between two groups. The results proved that individual, social, economic and psychological factors effect addiction relapse. Recognition of factors associated with addiction relapse can be very helpful to make appropriate decisions in planning and implementation of preventive and treatment programs.

Key words: Treatment of addiction, addiction relapse, self-referred drug rehabilitation centers

INTRODUCTION

A few phenomena can be found which have threatened human societies like addiction. Despite of risks and complications of addiction, the number of victims of this deadly trap is increasing continually (1). Collapse of individual character, destruction of a family, increasing the other types of damages and social crimes, reduction of work labor productivity, increasing the unemployed people who are burden on society, hospital bed occupancy, decreasing the public health rate and many other complications have been all pointed out in discussions about addiction in a society (2). However, it can be seen that preventive programs have failed to achieve a breakthrough in this direction (3).

The higher rate of addiction relapse after quitting drugs, in which an addict, after quitting drugs, has a penchant for re-experiencing the effects of drugs, is one of the challenges faced by behavioral scientists (4). The Welfare Organization has stated that about 90% of addicts who quit drug consumption, start using again and their addiction relapse period does not last for more than some weeks or months. Addiction treatment is not often performed completely and just eliminating the physical dependency using medicine treatment, purifying the blood and removing toxins are satisfied and less attention is paid to their psychological and social causes (5).

Methadone is a complete agonist opioid which has been confirmed for the treatment of drug addiction (6-8), but one of the present major challenges of methadone maintenance treatment is the sustainability of the treatment or prevention of addiction relapse (9). This indicator is very important in methadone maintenance treatment (10). Magura, Esteban and Liu studies had reported the maintenance treatment 23, 7 and 2.5 months respectively (11-13)

According to studies in Iran, 20-90 percent of addicts, who are undergoing treatment, experiences addiction relapse (14-15). Sadeghi Ahari in his study also showed that in 80% of people the disease recurs in less than 6 months (16).

Addiction relapse is a complex phenomenon in which individual factors (spiritual poverty, depression, disease, enjoyment, lack of self-confidence, seeking for independence, lack of personality development and hopelessness, low education), family factors (addiction of one or more members of a family, family conflicts, poor parenting, unemployment parents, especially the father, illiterate parents), social factors (school environment, bad friends, bad entertainment, unemployment, lack of social acceptability, cultural poverty, population growth, uncontrolled migration), and geographic and economic factors (living in drug traffic routes, ease of access to drugs, poverty and economic crisis, unemployment and escape from life's problems) are involved (2). Addicted friends, mental pressure, visiting the previous sites, traumatic situations, rejection by family and society and viewing the objects and tools used for drug consumption have been considered as effective factors in relapse by Fallahzadeh and Hosseini (17).

According to Gong (18), Yang (19) and Lin (20) studies, good relationship between addicted people and their families, their families' support and patient's enrollment for receiving methadone play an important role in preventing addiction relapse. Other studies have pointed out to fixed income and low record of crime as the factors affecting methadone maintenance treatment and prevention of relapse (21-22).

Although drug therapy is considered as the first treatment for addiction, using drug therapy regardless of an addicted person's psychological, cultural and economic dependency emphasizes only the removal of the effective substance in drugs (morphine); while most experts believe that a long-term psychotherapy and group therapy for patients are more important than detoxification (2).

Given the complexity of the addiction relapse phenomenon, an accurate understanding of mechanism, nature, causes and predisposing factors involved in relapse can be helpful in adoption of appropriate measures for control and prevention from this big social problem. Therefore this study was designed to determine the factors affecting addiction relapse in patients under methadone maintenance treatment in drug rehabilitation centers in Khuzestan province.

MATERIALS AND METHODS

Method:

This study was a cross-sectional descriptive and analytic study. In this study, addicts going to self-referred drug rehabilitation centers in Khuzestan province during one solar year from March 21, 2014 to March 20, 2015 were participated.

Materials:

Study data were collected through the country questionnaire of studying the drug consumption pattern. The questions of this questionnaire contained demographic data and some information about consumption pattern, motivation of consumption and causes of drug quitting in these people. This questionnaire was filled in the self-filled manner and when people were illiterate or not fluent, the questionnaire was filled in the form of an interview by a good questioner.

Procedure:

After obtaining approval from the Ethics Committee of the Medical University of Ahvaz, all patients going to self-referred drug rehabilitation centers from March, 2014 to March, 2015 were considered as the target population. Objectives of the study were clearly and fully explained to those people. Participants were entered the study after enouncing their consent and completing the consent form consciously. Participants were divided into two groups: those who had experienced addiction relapse before (Group I) and those who was experiencing addiction relapse for the first time (Group II). Then they were given the questionnaire of the study plan. The collected data were analyzed using statistical SPSSv22 software.

Sample size and sampling method:

The sampling method used was the census and all 4400 patients going to private and public self-referred drug rehabilitation centers in Khuzestan province from March 21, 2014 to March 20, 2015 were studied.

Data analysis:

In descriptive statistics, mean and standard deviation were calculated for the continuous variables and the frequency and percentage frequency were calculated for the nominal and classified variables; and in analytic statistics, chi-square test was used to determine the relationship between qualitative variables; t-test for the relationship between the dual-mode qualitative variable and average of the numerical variable or its nonparametric equivalent and ANOVA was used to determine the relationship between the multimode qualitative variable and the average of the numerical variable.

RESULTS

Out of 4,400 people going to self-referred drug rehabilitation centers, in the first group (Relapse) 2844 people (97.6%) were men and 70 people (2.4%) were women and in the second group (the first visit to rehab) 1383 people (97.3%) were men and 39 (2.7%) were women. The average age in the first group was significantly higher than it in the second group (Table 1). In terms of marital status, married people had the highest frequency in both groups and in the relapse group the frequency of this variable was higher. And in terms of marital status, no significant statistical difference was observed between these two groups ($P < 0.001$). Among the subjects, the highest frequency was for urban population.

In both groups, most participants were workers and unemployment had the highest frequency in the relapse group. In the terms of occupation, no significant difference was observed. ($P = 0.002$) Table 1

The average age of starting drug consumption in the first group was 23.90 ± 7.63 and in the second group was 26.4 ± 9.0 and no significant statistical difference was observed between two groups ($P = 0.03$).

The highest relative frequency of consumptive drugs was for opium. Synthetic drugs consumption in the relapse group was higher.

Most people in both groups stated that the suggester for drug consumption had been their friends (in the first group 42.5% and in the second group 30.6%) and its place had been mostly in a friendly party (in the first group 42.6% and in the second group 36.1%)

Graph 1: Comparison of high-risk behaviors in subjects according to their history of addiction relapse

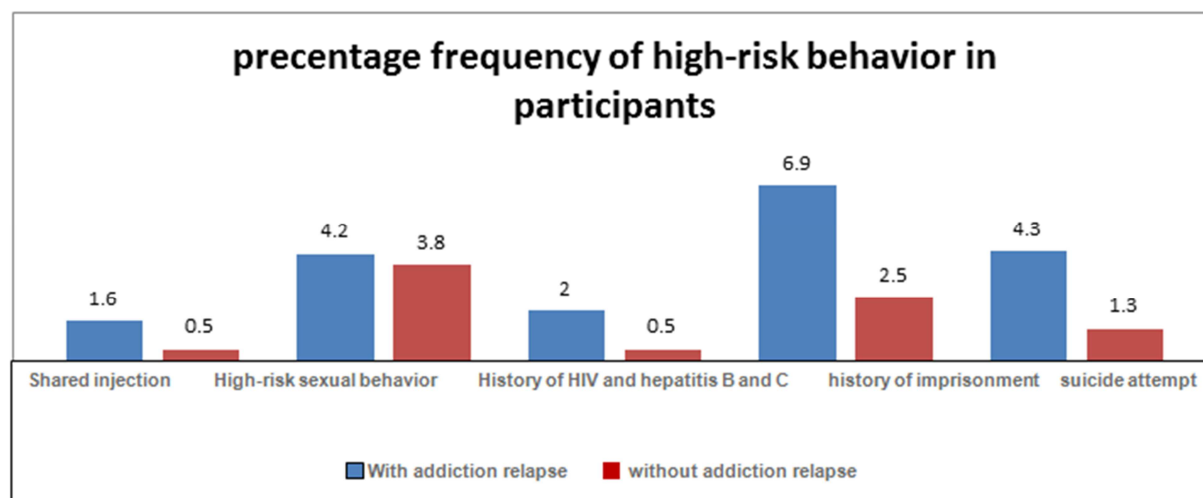


Table 1. Demographic characteristics of the subjects

variable	History of addiction relapse				P-value
	Positive		negative		
	number	percent	number	percent	
Gender					
Male	2844	97.6	1383	97.3	0.50
Female	70	2.4	39	2.7	
Permanent residence					
City	2702	92.7	1265	89	<0.001
Village	206	7.1	152	10.7	
Nomads	6	0.2	5	0.4	
Education					
illiterate	110	3.8	75	5.3	0.001
Primary	426	14.8	2224	15.9	
Guidance	941	32.6	369	26.2	
High school or diploma	53	36.1	509	36.1	
Collegiate	354	12.3	228	16.2	
Theology	3	0.1	6	0.4	
marital status					
Single	623	21.5	370	26.3	<0.001
Married	2170	75	963	68.3	
Divorced	75	2.6	44	3.1	
spouse died	21	0.7	27	1.9	
Cohabitation	3	0.1	5	0.4	
Occupation					
Students	10	0.4	9	0.72	0.002
Student at university	42	1.6	40	3.21	
Soldier	14	0.5	11	0.88	
housewife	42	1.6	18	1.44	
Worker	960	36.9	436	35.5	
Employee	401	15.4	227	18.25	
Farmer	88	3.4	50	4.02	
Retired	171	6.6	90	7.23	
Unemployed	282	10.8	109	8.76	
Other	595	22.8	254	20.42	

Most participants have reported that the people around them had had the history of drug consumption (52.9% in the first group and 48.4% in the second group) and also they have reported that their main motivation of drug consumption was pleasure and then family problems. There were more family problems in the first group than it in the other one. Drug consumption method was smoking mostly, but injection, which is more dangerous than other methods, in the addiction relapse group was reported more than it in the other group. (Table 2)

In this study, the history of high-risk behavior, injection, high-risk sexual behavior, common injection, suicide, and imprisonment in the addiction relapse group were higher than them in the second group. In terms of the history of suicide ($P<0.001$), common injection ($P=0.001$), infectious diseases, AIDS, hepatitis B and C ($P<0.001$), imprisonment ($P<0.001$) and drug injection ($P<0.001$) a significant statistical difference was observed between two groups (Graph 1).

Table 2: The difference between the motivation of drug consumption, the reason of seeking for treatment, the type of consumptive drug, the method and the number of drug consumption and the history of addiction in subjects

History of addiction relapse	History of addiction relapse				Pvalue
	positive		negative		
	number	percent	number	percent	
Motivation of drug consumption					0.006
Pleasure	1117	38.9	534	37.9	
Unemployment	214	7.5	145	10.3	
Curiosity	403	14	224	15.9	
Physical problems	388	13.5	157	11.1	
Family and mental problems	557	19.4	248	17.6	
Treatment of insomnia	76	2.6	34	2.4	
Other	116	4	66	4.7	
Reasons of seeking for treatment					<0.001
Physical complications	722	25.66	355	25.7	
Psychological Effects	1024	36.39	404	29.3	
Financial Problems	412	14.64	238	17.2	
Pregnancy	3	0.10	2	0.1	
Legal problems	14	0.50	14	1	
Marriage	98	3.48	34	2.5	
Recruitment	51	1.81	36	2.6	
Pressure from family, friends and colleagues	326	11.58	1177	13.8	<0.01
Other	164	5.83	121	8.8	
Type of consumptive drug					
Opium	1411	48.8	792	56.13	
Sap of opium	576	19.9	282	19.98	
Heroin	387	13.4	62	4.39	
Hashish	87	3	70	4.96	
Crack	84	2.9	34	2.41	
Glass	161	5.5	54	3.82	
Ecstasy	2	0.1	3	0.21	
LSD	2	0.1	1	0.07	
Cocaine	7	0.2	2	0.14	
Tramadol	102	3.5	74	5.24	
Sedations	10	0.3	9	0.63	
Cigarette	2	0.1	0	0	
Alcohol	17	0.6	5	0.35	
Other	44	1.5	23	1.62	
method of drug consumption					0.72
Smoking	2972	70.1	80	74.1	
Eating	1129	26.6	26	24.1	
Injection	75	1.8	2	1.9	
Inhalation	60	1.4			
Other	2	0.01			
The number of drug consumption					<0.001
once a day	851	20.3	43	39.8	
Two times a day or more	3073	73.3	60	55.6	
once a week	110	2.6	2	1.9	
Twice a week or more	98	2.3	3	2.8	
Other	61	1.5			

In the first group 5.5% and in the second one 3.7% had reported the history of psychological diseases ($P=0.02$). In both groups, nearly 94% of all subjects stated that they had received the visiting psychologist services.

Among the participants in the first group 50.3% has reported that their first selection was drug quitting by their own and then referring to private rehabilitation centers in which agonist medicine has been being used.

People with a history of addiction relapse in this study 3.60 ± 4.49 times had attempted to addiction quitting averagely and their average purity period had been 8.60 ± 10.93 months.

DISCUSSION

The results of this study showed that friends were important in restarting drug consumption and addiction relapse among the participants. According to Shargh (1), Din Mohammadi (23), Karami (24), and Sadeghiyeh Ahari (16) studies, socializing with friends who were drug consumers had been reported as the most reason of addiction relapse which is consistent with the findings of this study.

The results of Afsar (26), Lin (27) and Meisami (28) study showed that there was a significant statistical relationship between addiction relapse and marital status. Based on their study, the highest frequency of addiction relapse happened in single, spouse died and divorced people. Conversely, in our study, addiction relapse among married people was seen more than it among other people that is consistent with another finding of our study which is the most important motivation of drug consumption after pleasure is family problems. It seems, according to the special cultural situation in the region, strengthening the basis of family ties and reinforcement of systems which provide consulting services for removing all these problems should be considered.

Easier access to drugs and more seeking diversity of urban people greatly put them in danger of addiction and relapse. This result was consistent with the other result of this study, in which pleasure had been reported as the most motivation of drug consumption, and Din Mohammadi's study.

Drug consumption in people who are near to an addicted person especially his/her family is very important in his/her restarting drug consumption or addiction relapse. In our study, the frequency of drug consumption in the families and people who were near to the subjects were significantly reported higher in the addiction relapse group.

This study showed that the age of starting drug consumption was important in addiction relapse and people in the relapse group had reported lower ages for starting drug consumption.

In this study, workers were at a high risk of addiction and relapse and this result was consistent with the Ahari's (16) study that this issue can be because of economic and social pressure, poverty and hard situation in labor environments for these people.

The frequency of unemployment in the addiction relapse group was higher than it in the other group which was consistent with other results in other studies. (29-33), which was consistent with the results of Ehsan Manesh's and Karimi's study (34). It seems that Welfare organization and the Ministry of Health should impose greater monitoring on the performance of these clinics.

Nasti Zaii's study (2) have pointed out to the ineffectiveness of psychotherapy sessions in the self-referred drug rehabilitation centers. In this study, although more than 90% stated that they had received psychologist visit, over 30% of people who had experienced a relapse of drug addiction and 16% of those who had quitted drug consumption for the first time had reported slips in the drug quitting period.

The results of this study proved that the frequency of high-risk behaviors in the relapse group was higher which can be an alarm for this issue that in the case of lack of control and prevention of addiction relapse in the future, we will face with more complex problems, including the problem of the increasing sexually transmitted diseases and suicide.

CONCLUSION

According to the results of addiction relapse, drug addiction does not only depend on a particular factor, but a combination of individual, family, social, cultural, economic factors are involved. Therefore, designing comprehensive studies in all over the country with the goal of recognition of effective factors on drug addiction relapse and awareness of predisposing factors in pushing people to drug addiction relapse and focusing on preventive strategies should be specifically considered.

Acknowledgment

This study was supported by deputy of Research in Ahvaz Jundishapur University of Medical Sciences with reference number: IR. AJUMS.REC.1394.419. We has special thanks to Deputy of Treatment for given permission to collect the data in Khuzestan Province.

REFERENCES

- [1] Sharg A SA, Neisari R, Aliloo L. survey of factors related to the relapse of addiction from view of addict patients attending to drug abuse treatment clinics in west Azerbaijan. *Urmia Medical Journal* **2011**;22 (2): 129-36. (Persian)
- [2] Nastizaii Nasser, Hezare Moghaddam Mahdiye, Malazehi Asma. Quarterly of Nursing and Midwifery school in Orumiyeh, Volume VIII, Number Three, Fall **2010-2011**, pg. 169-174.
- [3] Tareman F (**2008**). [Drug Abuse in Teens]. 3rd edition. Tehran, Tarbiyat Publications. (Persian).
- [4] Ahmadpanah M, Mirzaei Alavijeh M, Allahver-Dipour H, Jalilian F, Haghighi M, Afsar A, Gha-Ribnavaz H. Effectiveness of coping skills education program to reduce craving beliefs among addicts referred to addiction centers in Hamadan: a randomized controlled trial. *Iranian J Publ Health* **2013**; 42(10): 1139-44.
- [5] Safari Mehdi, Musavizade Seyyede Narjes. The Scientific Journal of the Nursing and Midwifery School of Shahid Beheshti University of Medical Sciences and Health Services. Volume 24, Number 86, Fall **2014-2015**, pg. 57-64.
- [6] Kelly SM, O'Grady KE, Mitchell SG, Brown BS, Schwartz RP. Predictors of methadone treatment retention from a multi-site study: A survival analysis. *Drug and alcohol dependence* **2011**; 117(2-3): 170–
- [7] Villafranca SW, McKellar JD, Trafton JA, Humphreys K. Predictors of retention in methadone programs: A signal detection analysis. *Drug and alcohol dependence* **2006**; 83(3): 218–24.
- [8] Gruber SA, Tzilos GK, Silveri MM, Pollack M, Renshaw PF, Kaufman MJ, Yurgelun-Todd DA. "Methadone maintenance improves cognitive performance after two months of treatment." *Experimental and Clinical Psychopharmacology* **2006**; 14(2):157–64.
- [9] Friedmann PD, Saitz R, Samet JH. Management of adults recovering from alcohol or other drug problems. *JAMA* **1998**; 279(15):1227-31
- [10] Zhang Z, Friedmann PD, Gerstein DR. Does retention matter? Treatment duration and improvement in drug use. *Addiction* **2003**; 98:673-84.
- [11] Magura S, Nwakeze PC, Demsky SY. Pre-and in-treatment predictors of retention in methadone treatment using survival analysis. *Addiction* **1998**; 93:51-60.
- [12] Esteban J, Gimeno C, Barril J, Aragonés A, Climent JM, de la Cruz Pellín M. Survival study of opioid addicts in relation to its adherence to methadone maintenance treatment. *Drug and alcohol dependence* **2003**; 70(2): 193-200.
- [13] Liu J, Dilixiati Y, Li F, Zhang F, Mo L, Jiao L, etal. Cox regression analysis on maintenance duration and affecting factors of methadone maintenance treatment. *Chin J AIDS STD* **2007**; 13: 160-1.
- [14] Mohseni A. Pathology and drug addiction. *Religion and life Magazine*. **2006**; 5:31. (Persian).
- [15] Bolhari J, Dabaghi P. Effectiveness of mindfulness-based relapse prevention in the treatment of opioid dependence. *J Addic Mental Health Research*. **2008**; 7:29- 43(Persian).
- [16] Sadegiye Ahari S, Azami A, Barak M, Amani F, Firuz S. Reviewing the causes of recurred addiction in patients who referred to centers introduced of Tehran welfare. *Ardabil Med Univ J* **2004**; 3 (4): 36-40. (Persian)
- [17] Falahzade H, Hoseyni N. Reviewing the causes of recurred addiction from the perspective of addicts who referred to welfare center of Yazd city. *Tolooe Behdasht J* **2005**; 15 (1,2):67-73.
- [18] Gong J, Pang L, Wu Z. Retention and associated factors for drug users in methadone maintenance treatment programs. *Chin J Dis Control Prev* **2005**; 9: 250-3.
- [19] Fang Yang, Peng Lin, Yan Li Qun He, Qisui Long, Xiaobing Fu, etal. Predictors of retention in community-based methadone maintenance treatment program in Pearl River Delta, China. *Harm Reduction Journal* **2013**; 10(1): 3.
- [20] Lin C, Wu Z, Detels R. Family support, quality of life and concurrent substance use among methadone maintenance therapy clients in China. *Public Health* **2011**; 125:269-74.
- [21] Magura S, Nwakeze PC, Demsky SY. Pre-and in-treatment predictors of retention in methadone treatment using survival analysis. *Addiction* **1998**; 93:51-60.
- [22] Torrens M, Castillo C, Perez-Sola V. Retention in a low-threshold methadone maintenance program. *Drug and Alcohol Dependence* **1996**; 41(1): 55-9.

- [23] Din Mohammadi MR, Amini K, Yazdan Khah MR. Survey of Social and Environmental Factors Related to the Relapse of Addiction in Volunteer Addicted Individuals In Welfare Organization of Zanzan. *Journal of Zanzan University of Medical Sciences* **2007**; 15(59): 85-94. (Persian)
- [24] Karami GHR, Ahmadi KH, Maleki M, Alipoor ME. Addiction Relapse in Iranian Veterans
- [25] Determination of Etiologies and Solutions in **2007**. *Iranian Journal of War and Public Health* 2010; 2(8):40-4. (Persian)
- [26] Afsar A, Bashirian S, Poorolaja J, Hazavehei SM, Vatan Nawaz E, Zinat Motlagh F. Predictive factors of relapse among patients treated with methadone maintenance treatment referred to addiction centers in Hamadan based on health belief model. *J Health Syst Res* **2014**; Health Education supplement: 2034-2045.
- [27] Lin C, Wu Z, Detels R. Family support, quality of life and concurrent substance use among methadone maintenance therapy clients in China. *Public Health* **2011**; 125:269-74.
- [28] Meisami A, Faramarzi B, Holakouei-Naeini K. How addicts think about addiction and community problems? *J Tehran Uni Med Sci* **2006**; 5: 34-43. (Persian)
- [29] Seraji A, Momeni H, Salehi A. Factors in drug dependence and relapse to drug use self-help group of Khomein city. *AMUJ*. **2010**; 13(3):68-75. (Persian).
- [30] Sydsadqyh Ahari S. Factors affecting referrals to drug addiction treatment centers affiliated to the welfare of its representative in Tehran. *J Ardabil UMS*. **2004**; 12:40-36. (Persian).
- [31] Kaldi A, Mahdavi R Survey of internal and external resources in the relapse to addiction in the camps. *Social Welfare*. **2003**;9: 307-331(Persian).
- [32] Amini K. Social and environmental factors associated with re in patients addicted to opiate drug addiction treatment centers in Hamadan state. *JZUMS*. **2003**; 45:47--1. (Persian).
- [33] Rimaz Shahnaz, Dastoorpour Maryam, Merghatikhoii Effat , Mohseni Shokrolleh .Demographic variables associated with relapse in women and men referred to the selected addiction treatment centers in Tehran, 2009: A case -control study. *Razi Journal of Medical Sciences* Vol. 20, No. 107, Apr-May **2013**
- [34] Ehsanmanesh M, Karimi-Keisami E. A review of the history and several studies regarding substance abuse in IRAN. *J Psychiatry Clin Psychol* **2000**; 5:62-78.