

Lifetime Pattern of Substance Abuse, Parental Support, Religiosity, and Locus of Control in Adolescent and Young Male Users

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Abstract

Background: In the current study, pattern of substance abuse among adolescence and early adulthood that have experienced one or more substances was assessed, and also parental support, religiosity, and locus of control were measured.

Methods: This cross-sectional study was conducted in Hamadan City, Iran in 2006. All subjects were selected from Hamadan City (urban area), Iran based on snowball sampling method. Participants were males who used alcohol and illicit drugs in their life (n=398), completed a self-administered questionnaire.

Results: Approximately half of the participants were used to smoke, drink, take marijuana and/or use opium regularly, and one in ten had taken ecstasy or heroine in the last weeks. Tobacco and alcohols were most common substance as a gateway and consequently marijuana and opium were the next substances. Initiation age result for using substance was ages 13 to 18 years. More than 90% classified as group who suffering familial support, 60.8% as low level of religiosity, and 51.5% of participants was external locus of control.

Conclusion: Our findings were similar to western countries pattern except that for opium. The high rate substances use by adolescents and changes in pattern of use suggests that all drug use need to be taken into account when addressing adolescents' substance use. Moreover, research is needed to identify possible mechanisms underlying the association between binge drug uses in the vulnerable groups.

Keywords: *Adolescent, Lifelong pattern, Social support, Substance abuse*

Introduction

Substance abuse has historically been, and currently is, the one of the important threaten behaviors among adolescents (1, 2). Information on substance use initiation, also known as incidence or first-time use, is important for policymakers and researchers. They provide valuable information that can be used in the assessment of the effectiveness of current prevention programs and in determining where prevention efforts need to focus. In addition, consideration efforts and resources have been spent attempting to understand the etiology of substance use and abuse to identify effective prevention and treatment strategies (3, 4).

As the initiation and early stages of substance uses have their roots in adolescence (5), research concerning the onset and development of substance abuse indicates that most youth initiate substance use by experimenting with alcohol, cigarette smoking during early adolescence (6, 7). In addition, adolescents may abuse drugs for a variety of reasons and their individual and environmental status affect on drug abuse related behaviors (8) and a number of studies emphasize on longitudinal studies to examine patterns of substance use among adolescents over time (9). As a result, by examining substance abuse over time, the nature of chronic use and transition to

more illicit substance use can more accurately be characterized.

In other hand, a great number of researches have focused on the impact of psychological risk factors on adolescents substance use. In current study, the status of parental social support, religiosity, and locus of control on substance use and abuse among adolescents and adulthoods were assessed. All these three factors are recognized as predictive factor in the onset of substance use among adolescents. Adolescents from more cohesive families are less likely to use substances (9, 10). Low levels of religiosity may be associated with adolescent onset of substance use and abuse. In other words, individual with high religiosity are generally less likely to experience ATOD (11-13). Moreover, adolescents and young adults with an internal locus of control less likely use and abuse ATOD (14, 15). Locus of Control refers to an individual's perception about the underlying main causes of events in his/her life (16).

Status of drug abuse in Iran

Iran is one of many countries where prevalence of drug abuse is increasing, especially among adolescents but there is limited amount of information available on adolescent's substance abuse in Iran. The results of one study reported that 6.9% of Tehran-Iran high school students had used illicit drugs (17) and another study, which was conducted on 10th grade students, showed that 16.9% of students were experimenters and 2.5% of students were regular smokers (18). Another study in the north west of Iran (Tabriz) showed that 12.7% of students had already used alcohol (19). Moreover, alcohol, opium, and marijuana are the common substances which adolescents use them in Iran (18, 20).

In accordance with the above-mentioned background, the objectives of the present study were 1) to identify pattern of substance abuse (ATOD) over a 1 yr period, 2) to find individual characteristics and environmental risk factors influences associated with an increased vulnerability to the initiation, continuation, and 3) to examine the psychological variables (locus of control, parental

social support, and religiosity) among adolescence and early adulthood ages substance abusers.

Materials and Methods

Participants

This cross-sectional study was conducted in Hamadan City, Hamadan Province Iran in 2006. Participants were 398 adolescence and early adulthood aged males ,recruited from multiple source of Hamadan City based on snowball sampling method, who had used alcohol, marijuana, opium, ecstasy, LSD, cocaine, heroine, or other drugs in their life. Data were collected from June to October 2006. Informed consent was obtained from all study participants before the project began. Next, participants completed questionnaires in which they reported their patterns of substance use and items assessing other factors relevant to substance use.

Measures

Eight demographics measures were examined: age, educational status (illiterate; elementary; secondary; high school; and academic level), number of siblings, dying of parents, having friends who had experienced substance (never; occasionally; always), having friends who smoked (never; occasionally; always), having parents who smoked (never; occasionally; always), initiation age of substance use.

Substance use was measured in three ways;(a) initiation of alcohol use (hand made, smuggled alcoholic drinks, and medical alcohol), marijuana, opium, ecstasy, LSD, cocaine, heroine, or other drugs use; (b) using substances over the past month, six months, 1 yr, and lifetime; and (c) the order of use. For each substances, information on frequency of use was rated as 1) once a month, 2) once a week, 3) two to three times a week, 4) four times or more a week. In order to assess the participants' history of smoking, students were asked, "Have you ever smoked cigarettes or hookah?" and response categories included "Never, Sometimes or often". Smokeless tobacco is not common among Iranians.

The respondents completed Aneshnsel and Su-coff's Parental social support scale (21). This

scale is unidimensional and includes 13 items to assess the relationship between the adolescents and their parent(s) or guardian(s). Example of scale items includes, "My mother and/or father show(s) me if I can trust them/him/her," and "really understand(s) me". The participants were asked to, "1) strongly agree, 2) agree, 3) disagree, or 4) strongly agree" and also one item "My mother and/or father don't/doesn't pay enough attention to me" was coded inversely. Each item included the option of choosing "I do not know" and the internal consistency of the scale was 0.92.

The Persian version of Rotter's Internal-External Locus of Control Scale (22) measured participants' locus of control. The LSC is a self-administered 29-item questionnaire that assesses the amount of perceived control the individual has over circumstances influencing his/her life. The LSC contains six filler items and is keyed in such a way that high scores indicate greater external control orientation.

General religiosity was measured by a modified set of 28 items based on Kendler's general religiosity scale (12). Examples of items include 1) "I ask God to help me make important decisions"; 2) "I feel God's love for me, directly or through others"; and 3) "Every day I see evidence that God is active in the world". Response categories were coded from 1 to 5 (strongly disagree, disagree, neutral, agree, and strongly agree). An estimated reliability coefficient ($\alpha = 0.89$) indicated that the measure of general religiosity was internally consistent.

Data analysis

All statistical analyses were performed using version 10.0 of the statistical software package SPSS (SPSS Inc., Chicago, Illinois, USA) and an alpha level of .05 for all statistical tests. A series of logistic regression, bivariate correlation and descriptive analysis were computed to determine pattern of substance abuse and predictive factors.

Results

The age range of participants was between 12 and 25 yr; 12-14(0.6%), 15-18(22.2%), 19-22 (31.8%) and 23-25(35.6%). Regarding the educational status, 2% of subjects were illiterate, 8.8%

elementary school, (35%) secondary school, 38.8% high school, and (15.5%) academic level. 70.8% of participants were living with both biological parents, 13.3% one biological parent, 7.8% alone, and 8.3% with other people. Most of participants were using substances recreationally (50.3%), 7% once a month, 11.3% once a week, 13.3% two to 3 times a week, 23.3% four times or more a week. Table 1 reveals the percentage of adolescents and early adulthood ages that had reported using substances at some stage in their lives (life-time), the past 1 yr, during the past 6 months, and the past one month. The most used substances were opium, marijuana, alcohol, and tobacco. Approximately, half of the participants appeared to smoke, drink, take marijuana and/or use opium regularly, and one in ten had taken ecstasy or heroine in the past weeks. In addition, frequency of substance use except tobacco were (57.3%) once a month, (11.3%) once a week, (13.3%) two to three times a week, and (18.3%) four times or more a week.

Initiation age result for using substance revealed that one of the participants has begun his substance use since the age of seven and overall initiation age was 2% for age of 11 and younger, 15% for age 12, 63.3% for ages 13 to 18, and 19.8% for ages 19 to 24. The peak subgroup was ages 13 to 18. The findings revealed that tobacco and alcohol are most common substance as a gateway and consequently marijuana and opium are the next substances. 6.2% of participants reported that they had used more than five types of substances in addition to tobacco in their lifelong. Sixty percent of participants have reported the handmade (home made or non standard) alcohol drinking, 56.5% beer, 62.5% smuggled alcoholic drinking, and 20.5% medical alcohols. Moreover, information about familial support, religiosity, knowledge (side effects of drugs), and poly-drug use among adolescent and young adult substance users are shown in Table 2. Parental social support score classification showed that 64.3% of total sample perceived low parental support. In order to assess the religiosity, 11.8% of total sample was classified as very low level

of religiosity, 48.8% low, 33.3% high, and 6.3% had very high level of religiosity. Locus of control classification showed that 51.5% of total sample was classified as external and 48.5% as internal locus of control.

In order to assess the relationship between locus of control, religiosity, social support, knowledge about side effects of drugs side effects, and initiation age of drug abuse, correlation analysis was performed. As shown in the Table 3, there are significant inverse relations between familial support and religiosity (r: -.39), between familial support and internal locus of control (r: -.15). In addition, religiosity was significantly related to in-

ternal locus of control (r: 0.18) and knowledge about side effects of drug abuse (r: 0.18).

Relationship between past-year use of alcohol, marijuana, opium, ecstasy, LSD, cocaine, heroine, and other substances with demographic and social factors were shown in the Table 4. Having friends who use or abuse is one of the important factors to use alcohol, marijuana, opium, and ecstasy and also number of sibling is significant inverse factor for protecting adolescents from ecstasy and LSD in substance users. Illiteracy and living without parents were the factors that could predict using opium.

Table 1: Self-reported frequency of use of tobacco, alcohol, marijuana, marijuana opium, ecstasy, LSD, cocaine, heroine and other substances

	Tobacco n (%)	Alcohol n (%)	Marijuana n (%)	Opium n (%)	Ecstasy n (%)	LSD n (%)	Cocaine n (%)	Heroine n (%)	Others n (%)
Past- month	316(79)	222(55.5)	147(36.8)	133(33.3)	27(7)	6(1.5)	2(0.5)	14(3.3)	5(1.3)
Past -six months	316(79)	291(72.8)	170(42.5)	173(43.3)	34(8.5)	9(2.3)	5(1.3)	22(5.5)	6(1.5)
Past- year	335(83/3)	320(80)	207(51.8)	191(47.8)	46(11.5)	12(3)	6(1.5)	27(6.8)	12(3)
Lifetime	372(93)	370(92.5)	257(64.3)	231(57.8)	72(18)	19(4.8)	9(2.3)	46(11.5)	23(5.8)

Table 2: Percentage of familial support, religiosity, knowledge (side effects of drugs), and poly-drug use among adolescent and young adult substance users

	Very low n (%)	low n (%)	moderate n (%)	well n (%)
Familial support	75(18.8)	182(45.5)	120(30.3)	23(5.8)
Religiosity	47(11.8)	195(48.8)	133(33.3)	25(6.3)
Knowledge (side effects of drugs)	68(17)	170(42.5)	157(39.3)	5(1.3)
	Less than two type n (%)	Three type n (%)	Four type n (%)	More than five type n (%)
Poly-drug use	198(47.7)	121(30.3)	56(14)	25(6.2)

Table 3: Correlation between religiosity, familial support, internal locus of control, knowledge about side effects of drugs, and initiation age (n=398)

Variables	X1	X2	X3	X4
X1.Familial support				
X2.Religiosity	-.39**			
X3.internal locus of control	-.15**	.18**		
X4. knowledge (side effects of drugs)	-.09	.18**	-.16**	
X5. Initiation age	.15*	-.11*	.06	.07

* P<.05, ** P<.01.

Table 4: Relationship for past-year use of alcohol, marijuana, opium, ecstasy, LSD, cocaine, heroine, and other substances with demographic and social factors among adolescent and young adult substance users

Substances type	Alcohol (n=328)	Marijuana (n=207)	Opium (n=191)	Ecstasy (n=46)	LSD (n=12)	Cocaine (n=6)	Heroine (n=27)	Other (n=12)
Illiteracy	2.77**	1.36	.42**	1.26	1.66	.64	.51	.78
Living without parents	.65	.99	1.85**	1.26	1.42	.00	1.54	2.65**
Number of siblings	1.05	1.05	1.16*	.70***	.58***	.86	1.21	.95
Father smoking	1.10	1.11	1.11	1.30	.79	.34	.85	.92
Mother smoking	1.08	1.27	2.11**	1.63	.76	1.16	.65	2.2*
Friends smoking	3.8*	1.78	4.92*	-	-	-	-	-
Friends substance use	4.10***	2.21**	2.48**	5.89*	.71	-	-	-
Dying of father	1.08	1.04	1.03	1.29	.75	1.54	1.47	.60
Dying of mother	.90	.78	.86	.34	.01	.00	.90	.82
External Locus of control	.90	.98	.87	1.01	.78	1.7	1.65	3.08***

* $P < .01$; ** $P < .05$; *** $P < .01$.

Discussion

The strength of this study lies in its epidemiological character, pattern of use, and the time frame of adolescents and young adults as an initiation period for substance use. An additional purpose of this study was to find religiosity, parental support, and locus of control status among adolescents and the early adulthood aged that had experienced substance in lifelong. Our findings confirm a commonly of alcohol use (92.5%) among adolescents and the early adulthood aged that had experienced substance in lifelong. Similar to the findings of other researchers, we found that self reported lifetime use of alcohol, tobacco, marijuana, and opium is more common than use of more illicit drugs. However, opium is not a common illicit substance in the worldwide but in the Middle East it was known as one of the common substances, especially in Iran. In other words, opium is known as local substance that is very common among Iranians. Moreover, the findings revealed that modern drug and heroine are other substances that common after alcohol, opium, and marijuana. Among these substances tobacco was the only substance being legally available in Iran. Furthermore, according to findings of this study for substance use progression, similar to those

of other studies, tobacco (88.5%) and then alcohol (12.5%) were main gateways for other illicit substances. After initiation with a gateway substance, adolescents progressed to other drugs such as marijuana, and opium. LSD and cocaine have never been taken as the first substances. Substance abuse follows a fairly predictable progression, beginning with experimental and recreational use of tobacco and alcohol, followed by opium, marijuana, and other illicit drugs (23, 24). Parental social support, which is operationalized as a measure of the self report quality of the relationship between the parents and adolescents, is known as an important factor for preventing substance abuse among adolescents (9, 10, 25, 26). Our finding in consistence with previous finding confirmed that a large part of this drug abuser sample reported low parental social support. Results showed that poor family functioning was a strong predictor of substances abuse for adolescents. The research results also show the importance of parental support. Promoting Parental-adolescents relationship as an important preventive factor would be useful in the comprehensive drug abuse preventative programs. This information might encourage more family interaction, as well as encourage programs to help families in their fu-

nctioning for improving parental- adolescent's relationship.

Moreover, low religiosity was another issue among participants that our findings showed 61.6% of them had weak religious beliefs. The inverse relation between general religiosity and substance abuse was reported by some studies (13, 27). Religiosity is a complex, multidimensional construct with substantial associations with lifetime psychopathology (12).

Previous research has found that parental control and support are jointly related to religiosity among adolescents (28-30) but inverse correlation between familial support and religiosity among drug abuser sample of youth was another finding indicating that parental support didn't affect on religiosity of adolescents among our Iranian adolescents. James, Thames, Bhalla, & Cornwell-Loyola (2002) reported that male adolescents had lower religiosity than female adolescents (29) and all of participants in this study were male. It seems the relation between parental social support and religiosity demands more study in the future.

Last year substance use relationships with demographic and social factors showed that using opium is significantly related to illiteracy, living alone, having smoker mother, and having substance abuser friends. Overall, having substance-abused friends is correlated for using alcohol, marijuana, opium, and ecstasy. One of the noticeable factors for using modern drugs was number of siblings. Because of different culture for Iranian and forbidding night clubs, adolescents are obliged to use modern drugs at home parties and adolescents without sibling are more intent to participate in these type parties. Inverse correlation between number of sibling and modern drug use shows sibling role for prevention of modern drug abuse but it could not act for opium use. 51.5% of participants were external locus of control, but there was not found significant relation for external locus of control and kind of substances. External locus of control was known as the risk factor of substance abuse. As a whole, people with a greater sense of control are at less

risk of substance use and the recent research showed that adolescents who believe they have high control over what happens in their life are more likely to protect him/herself against substance use and abuse (31,32).

However, the present study has several methodological strengths but our findings are limited to males and also inhalants and prescribed drugs were not assessed. In addition, the risk factor findings are limited to exposed population and so it would be better to conduct another study among adolescents population. Finally, the high rate of concurrent use of substances by adolescents suggests that all drug uses need to be taken into account when addressing adolescents' substance use and how preventative substance programs for high risk groups and ages could be provided.

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