

## Relationship between alcohol and occurrence of various offenses

Mina Shabani<sup>a\*</sup>, Mehrdad Setareh<sup>b</sup>, Seyed Nouraddin Mousavinasab<sup>c</sup> and Nadia Falahatgar<sup>d</sup>

<sup>a</sup>Assistant Professor, Psychiatrist, Psychiatry Department, Shahid Beheshti Hospital, Zanjan University of Medical Sciences, Zanjan, Iran

<sup>b</sup>Forensic Medicine Department, Zanjan University of Medical Sciences, Zanjan, Iran

<sup>c</sup>Associate Professor, Biostatistician, Social Medicine Department, Faculty of Medicine, Zanjan University of Medical Sciences, Zanjan, Iran

<sup>d</sup>General Practitioner, Zanjan University of Medical Sciences, Zanjan, Iran

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### ABSTRACT

Alcohol is the most prevalent abused drug in the world and brings out a large amount of medical expenses to the society. This paper presents an empirical investigation to devise preventive measures and identify the groups at risk. In this study, a descriptive study was conducted among people who were arrested by the police because of committing illegal actions and were suspected of alcohol usage were referred to the organization of forensic medicine. The studied variables include gender, age, state of affair, marital status, type of crime, the time of drug use, tranquillizer drugs and the times of psychiatrist visit. Out of 305 subjects, 204 (66.9%) cases had a positive respiratory test result and 101 (33.1%) were negative. The results showed that committing crimes due to quarrel and wrangling (34.3%) and being drunk in the public (29.7%) were prevalent among the people who used alcohol. Driving accidents also had 18% prevalence. 32.7% of the people who had a negative respiratory test result had committed crimes because of being drunk and 29.7% of them had quarrel and wrangling. The high rate of alcohol use in people who referred from the disciplinary office to the organization of forensic medicine demonstrated that it was necessary to devise a plan in order to improve a person's awareness of harmful alcohol use and to identify the vulnerable groups in the society.

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## 1. Introduction

Nowadays alcohol is used as a tranquillizer to reduce anxiety and create good feelings or even euphoria. In spite of this, alcohol is also the most abused drug in the world, which earmarks most of medical and social expenses only to itself. Almost half of the driving fatal accidents included a person whose alcohol serum level was near or more than the legal limit. In addition, one of the main reasons of youth death is driving while being drunk (Katzung & Trevor, 2008). In addition, alcohol disorders is blamed as the third health problem after the heart diseases and cancer in the USA (Kaplan & Sadock, 1995). Excessive drinking can lead to severe social harms such as family violence, decrease

\* Corresponding author. Tel: +98 9123410070

E-mail addresses: minashabani1@yahoo.com (M. Shabani)

of professional efficiency, behavioral and emotional problems among the patient's children, frequent absence because of illness, unemployment, driving accidents (Gelder et al., 2000). According to Gelder et al., (2000), almost one-third of driving accidents in Britain was because of excess of alcohol usage among drivers and committing crimes, which contain not only social disorders and minor crimes but also fraud, sexual and violence plus murder (Gelder et al., 2000). A survey through judicial centers in the US in 1996 showed that 2 million out of 5.3 million convicted criminals was drunk when they were committing crime (Greenfield, 1998). In addition, a survey on medical expenses associated with alcohol use indicated that almost 30% of people who were accepted in the hospitals had problems related to alcohol, simultaneously. However, thousands of babies born in the US have had morphological or shortages because of their parent's alcohol use (Katzung & Trevor, 2008). In 2003, a study carried out in England and Wales showed that excessive alcohol drinking was more widespread among males between 18 to 24 years old and displayed its effect in quarrel and wrangling behaviors. In this survey, 39% of the subjects confessed of committing crime when they were drinking alcohol (Richardson & Budd, 2003). In 2008, another study in the US discovered that people who used alcohol were engaged more in high-risk sexual behaviors.

Most alcohol abusers were poorly educated, had low level occupations and used illegal drugs and tobacco more than other people did. The peak rate of alcohol use was among teenagers, i.e. between 12 and 17 years old. In addition, motorcycle accidents due to alcohol use were the main reason of death among teenagers (Witkiewitz & Marlatt, 2004). To the best of our knowledge, the only survey about this issue in Iran was conducted in the Khorasan Province with using chromatography gas method and on those who were suspect to being drunk in the public (Timche-Hariri et al., 2008).

It should be mentioned that in Iranian society, just like many other Middle-Eastern nations, using alcohol itself and being drunk in the public is considered a crime. Although alcohol use is forbidden in the stance of public, still there are many cases of crimes due to alcohol use in this country and many of these countries. In this study, we try to show the destructive effect alcohol use and will try to find new solutions for the alcohol use and its following crimes.

## **2. Method**

A descriptive study was conducted among people who were arrested by the police because of committing illegal actions and were suspected to have used alcohol and thus being drunk in the public. They were referred to the forensic medicine organization in order to measure the serum level of their alcohol based on the respiratory alcohol test in Zanjan between February and October 2009. The studied variables included gender, age, state of affair, marital status, type of crime, the time of drug use, tranquillizer drugs and the times of psychiatrist visit.

Crimes such as struggling, disturbing others in the public, risky driving, driving accidents and family problems were considered the signs of using alcohol. The level of alcohol expiration of these subjects was estimated by the respiratory alcoholmeter. The respiratory alcoholmeter device (FC 20 model) was made by LIFELOC Company. Descriptive statistics was attained and Chi-square test were used to analyze and to find significant differences between the sub-groups. All statistical analyses were conducted by SPSS 16. An alpha probability ( $p$  value) of less than 0.05 was considered significant.

## **3. Results**

The socio-demographic characteristics of the subjects are shown in Table 1. Three hundred and five subjects who were arrested by the police due to committing illegal actions suspected to be the result of alcohol use were referred to the Zanjan Forensic Medicine Organization to be interviewed and tested. From among them, three hundred (98.4%) were males. The mean age of all subjects was 23.7

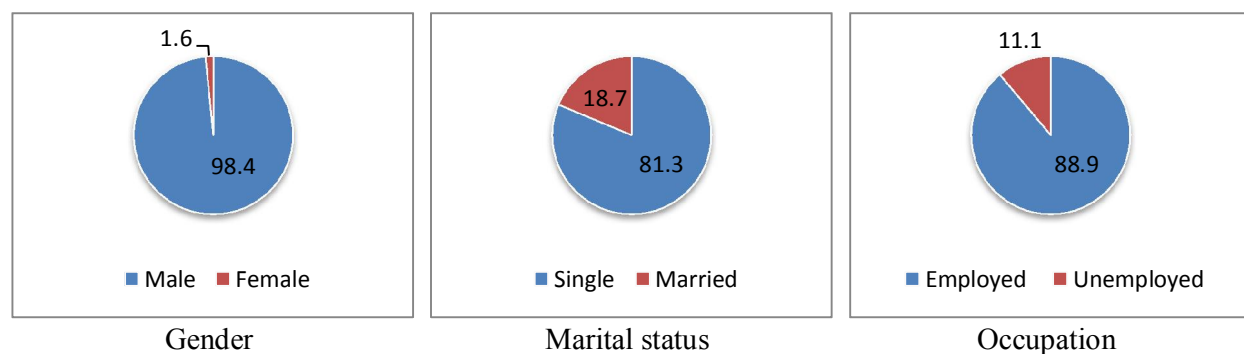
(SD 7.5). Two hundred and forty five subjects (81.3%) were single and 57 (18.7%) were married. 171 (56%) subjects were illiterate or just had primary education and 134 (44%) had higher education. Two hundred and eighty subjects (91.8%) had less than \$300 income, 16 (5.2%) between \$300 and \$500 and only 9 subjects (2.9%) had more than \$500 income per month.

**Table 1**

The socio-demographic characteristics of alcohol consumption in the dispatched people from police to Zanjan Forensic Medicine Organization for the analysis of the serum level of alcohol in forms of alcohol consumption in 2009

		Total	Positive respiratory alcohol test result	Negative respiratory alcohol test result	P-value
n	number	305	101	204	
Age (years)	Mean $\pm$ SD	23.7 $\pm$ 7.5	23.5 $\pm$ 5.9	23.8 $\pm$ 8.2	0.7
Sex	male	300(98.4%)	204	96	0.004
	female	5(1.6%)	0	5	
Education	Illiterate or primary education	171(56%)	58	113	0.25
	Secondary or high school education	134(44%)	43	91	
Married status	Single	245(81.3%)	163	85	0.37
	Married	57 (18.7%)	41	16	
Income	Less than \$300	280 (91.8%)	190	90	0.42
	\$300 - \$500	16 (5.2%)	9	7	
	\$500 and more	9 (2.9%)	5	4	
Employment situation	unemployed	34(11.1%)	13	21	0.51
	employee	271 (88.9%)	88	184	
Smoking status	yes	134 (43.9%)	86	48	0.4
	no	171(56.1%)	118	53	
History of psychiatric medication	yes	49 (16.1%)	36	13	0.28
	no	256 (83.9%)	168	88	
History of psychological disorder	yes	52 (17%)	37	15	0.47
	no	253 (83%)	167	86	
Alcohol use history	yes	90 (29.5%)	70	20	0.009
	no	215 (70.5%)	134	81	

Among these suspects, 204 (66.9%) cases had a positive respiratory test result and 101 cases (33.1%) were negative. 34.3% of the subjects were arrested due to quarrel and wrangling, 30.9% for being drunk in the public and 9.8% because of driving accidents. It should be mentioned that 32.7% of the suspects who had a negative respiratory test result had also committed crimes because of being drunk and 29.7% of them had a history of quarrel and wrangling. There was no significant association between the prevalence of using alcohol and the type of crime. Fig. 1 demonstrates the summary of personal characteristics of the participants.



**Fig. 1.** Personal characteristics of the participants

In addition, there were no significant differences between using alcohol, age and occupation status. 86 subjects (42.2%) from among those who had a positive respiratory alcohol test result smoked cigarette versus 48 subjects (47.5%) from those who had a negative respiratory alcohol test result. 36 cases (17.6%) of those with positive respiratory alcohol test result had a psychiatric treatment history

versus 13 subjects (12.9%) from among those with a negative respiratory alcohol test result. There was no significant association among these variables (Table 2).

**Table 2**

Frequency of crime type in the dispatched people from the police to Zanzan Forensic Medicine Organization for the analysis of the serum level of alcohol in forms of alcohol consumption in 2009

Type of crime	Positive respiratory alcohol test results		Negative respiratory alcohol test results	
	Frequency	Percent	Frequency	Percent
Being drunk in the public	63	30.9	33	32.7
Quarrelling	70	34.3	30	29.7
Road accidents	20	9.8	7	6.9
Traffic accident	15	7.4	10	9.9
Family violence	10	4.9	3	3
Insulting others	16	7.8	1	1
Private plaintiff	10	4.9	6	5.9
Alcoholic Drinks Trafficking	0	0	4	4
Murder	0	0	7	6.9
Total	204	100	101	100

Seventy cases (34.3%) of those with a positive test result had a history alcohol use versus 20 subjects (19.8%) from those with a negative test result. Hence, there was a significant difference between the two variables.

#### 4. Discussion and Conclusion

Using alcohol and the aggressive behaviors after it in the society are influenced by several factors. The prevalence of committing crime due to alcohol use in this study was about 67% which is higher than the result of a study which has been carried out in the US in 1996 (committing crime following the use of alcohol was 36% in that study) (Greenfield, 1998). Since alcohol use is banned in the public in this country and is a crime itself, this percentage is considered much too high.

In our study, nearly all of the subjects who used alcohol were males. However, the results of a study conducted in the US in 2007 showed that there were no clear differences between male and female in relation to using alcohol and crime (Weisner & Nones Dinis, 2007). Moreover, the results of this study showed that committing aggressive crimes due to alcohol use among the youths (i.e. less than 30 years old) in Zanzan (Iran) was the same as the study which was carried out at Miami University of Florida in 2007 (Dawkins, 2007).

There were no significant associations between age and alcohol use in this study, which is similar to another study conducted in the US in 2008 (Carpenter & Dobkin, 2008). In addition, 42% of the people used alcohol and also smoked in our study was similar to a study carried out in Turkey in 2009 (this study stated that smoking cigarette strengthened the impact of aggressive behaviors of alcohol users) (Saatcioglu & Erim, 2009).

Results of the present study demonstrate that most of the alcohol users had a low income, which is similar to the results of a study done in Nigeria in 1993 (Ohaeri & Odejide, 1993). However, a study carried out in Norway in 2002 showed that people with higher incomes used alcohol more, although aggressive behaviors in these people were less (Ohaeri & Odejide, 1993).

About 80% of our alcohol users were single which was similar to a study in 2005. This study, conducted in the US, demonstrated that divorced or single people use alcohol 3 times more than married people (14). The frequency of alcohol use in those with positive test results was 34% vs. 19% in those with a negative test results in this study. This data is incomparable with other countries in which alcohol use itself is not forbidden.

Finally, considering these high rates of alcohol use and crimes related to them, it seems necessary that Middle-Eastern countries like Iran develop a plan in order to improve a person's awareness of harmful alcohol use and to identify the vulnerable groups in the society.

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