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# Original Article

# Comparison of Pattern of Alcohol Consumption and Related Factors in Patients Referred to Referral Hospitals in Shahrekord, Iran (2016-2017)

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## Abstract

**Background and aims:** The aim of the present study was to investigate the pattern of alcohol consumption and its related factors in the patients referring to hospitals.

**Methods:** A hospital-based case control study was carried out in Shahrekord during 2016-2017. A total of 150 individuals who had self-report of alcohol consumption and history of alcoholism entered into the case group based on the convenience sampling method. Likewise, 300 individuals who did not have self-report of alcohol consumption entered into the control group. Group matching was performed based on the date of admission to the hospital, type of disease, complications, and duration of the disease. This study explored the pattern of alcohol consumption variables, spiritual health, quality of life, and general health. Odds ratios (ORs) with a 95% confidence interval (CI) were calculated as well. **Results:** The causes of onset of alcohol consumption were curiosity (41.40%), social class and imitation of others (17.40%), and life problems (15.30%). Further, the causes of continued alcohol consumption were attributed to the interest in taste and smelling (23.30%), emotional problems (20%), as well as loneliness feeling and life problems (12.60%). The mean of general health scores in the case and control groups were 29.8± 5 and 29.3± 4, respectively (*P*=0.296). The mean of the quality of life in the case group and control group were  $32.13\pm 7$  and  $32.11\pm 5$ , respectively (*P*=0.98). The differences in the scores of spiritual health in two groups were not statistically significant (*P*=0.96).

**Conclusion:** An attempt should be made to improve the strategies to satisfy the emotional sense and health recreations of society.

Keywords: Alcoholic beverages, Alcohol abuse, Offenses, Alcoholism, Case control study

# Introduction

Alcohol consumption is one of the most serious human and critical problem facing today's countries.1 A study in 2016 reported that 32.5% (95% uncertainty interval [UI] 30.0-35.2) of people globally were current drinkers. Furthermore, 25% (95% UI: 23-27) of females and 39% (95% UI: 36-43) of males were reported to be current drinkers.<sup>2</sup> Alcohol-related disorders included alcohol dependence, alcohol abuse, side effects, and intoxication. Alcohol is one of the five main causes of illness, disability, and death and is regarded as a risk factor for more than 200 diseases, disorders, and injuries.<sup>3-6</sup> The various medical complications of alcohol consumption are gastrointestinal complications, cancer, muscular changes, along with neurological and psychiatric complications. The most common complication of long-term alcohol is alcoholic liver disease.7,8 Alcohol could increase the risk of pharynx, oral cavity, esophagus, and larynx cancers more severely.<sup>6,8</sup> Acutely, modest doses of ethanol can not only increase sexual drive but can also lead to a decrease in the erectile capacity of men. Even in the absence of liver impairment, a significant minority of chronic alcoholic men indicated irreversible testicular atrophy with shrinkage of seminiferous tubules, resulting in a decrease in the ejaculate volume and a low sperm count.<sup>6,9</sup> Between onehalf and two-thirds of alcoholics can suffer from skeletal muscle weakness caused by the acute alcoholic myopathy, which may improve with abstinence while it cannot be fully cured. Effects of alcohol consumption on the skeletal system can be lower bone density.<sup>6,10</sup> In their study, Peng et al reported that the chronic alcohol tremors, myopathy, Wernicke encephalopathy, and cerebellar degeneration.<sup>6,11</sup> Consuming alcoholic beverages to overcome depression and anxiety has been a common practice.<sup>6,11</sup>

In a study, 10% of the leading cause of death was observed in the 15-49 year-old group, which was mainly contributed to the alcohol consumption.<sup>12</sup>

Alcohol consumption may be associated with negative health and social consequences for the alcohol users and

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people around them. It may also be accompanied by other socio-economic costs imposed upon the users such as job loss and production problems due to injury or death of the workforce, absenteeism, and accident injuries caused by carelessness and the lack of concentration, stigma, less access to health care, and loss of savings.<sup>13-15</sup> Among the risk factors associated with alcohol consumption, excitement as a personality trait was reported to be the most prevalent factor.<sup>16</sup>

In the last decades, the prevalence of alcohol consumption has increased in Iran due to the excitement of young people, peers network, virtual networks, as well as the misconception among young people that alcohol consumption is directly related to the social prestige and level of culture.<sup>17-19</sup> Iran ranked number 166 for alcohol consumption in the world in 2014.<sup>20</sup> According to a study by the Ministry of Health, 4.9% of people over the age of 18 in Iran report a history of alcohol consumption at least once a year, which is more noticeable in men, people aged 20 to 29, single people, individuals with secondary or higher education, employed people, people living in the city, and also the people with higher socio-economic status.<sup>21,22</sup> In a comprehensive and national study on the prevalence of alcohol consumption in industrial occupational groups in 2013, the results of self-reported questionnaires demonstrated that the consumption of alcohol was totally 2.3%, out of which 2.5% and 0.5% were related to men and women, respectively, indicating a lower prevalence of alcohol consumption in Iran compared to other countries.<sup>23</sup> The highest prevalence of alcohol consumption was seen among the industrial workers in Ardabil (10.7%), Kermanshah (10.6%), Gilan (7.1%), Alborz (6.9%), Fars (5.4%), Mazandaran (4.2%), Tehran (3.5%), East Azerbaijan (2.9%), Qazvin (2.2%), Golestan (1.9%), South Khorasan and Isfahan (1%), and Qom (0.9%).<sup>23</sup>

In another study conducted in Iran, the results revealed that the relative frequency of alcohol use at least once a year in 2012 was estimated to be 2.31% (95% CI: 2.12%, 2.53%) among general population aged above 15. The relative frequency in males was about eight times higher than that of females (4.13% versus 0.56%) while the relative frequency among those aged 18 to 30 was three times greater than those aged above 30 (3.97% versus 1.36%).<sup>22</sup>

The reasons for the lower prevalence of consumption in Iran can be attributed to the fact that Iran is an Islamic country in which the consumption of alcohol is illegal. Further, due to the illegality of alcohol consumption in Iran or fear of losing one's job, many employees refused to report alcohol consumption.<sup>22,23</sup> Since there is scant information about the situation of alcohol consumption in Chaharmahal and Bakhtiari Province, this study was conducted in this regard.

## **Materials and Methods**

This hospital based case-control study was carried out in Kashani and Hajar hospitals of Shahrekord, University of

Medical Sciences, during 2016-2017 in Chahrmahal and Bakhtiari Province in Iran.

The following formula was used to calculate the required sample size in each group.

$$n = \frac{2 \times (z_{1-\alpha/2} + z_{1-\beta})^2 \delta^2}{d^{*2}} = \frac{16 \times \delta^2}{d^{*2}}$$

According to the standard deviation report of alcohol consumption in previous studies (22.5) and considering the *d* as a clinical difference equal to 2, the required number of samples was 150 people in each group.<sup>1,2,13</sup>

The least significant clinical difference (d) for the researcher between the means of the two groups was 2. The number of cases was 150 using alpha of 0.05 and beta of 20%. To increase the power of the study, the used logistic regression analysis approach, and the number of variables, the sample size increased to 300 people in the control group. The number of control group were twice as much as the case numbers. The total sample size was 450 people.

Individuals (n=150) who had self-report of currently consuming alcohol and history of alcoholism entered into the case group based on convenience sampling method, whereas 300 individuals who did not have selfreport of alcohol consumption entered into the control group. Group matching was performed based on the date of admission to the hospital, type of disease, as well as complications and duration of the disease. Due to limitations and lack of sampling framework, samples entered into the two groups study based on convenience sampling method in the internal and outpatient wards of hospitals. Therefore, people with ethanol and methanol poisoning, Wernicke-Korsakov syndrome resulting from alcohol consumption, gastrointestinal complications (i.e., liver cirrhosis and alcoholic hepatitis, and the like), and cardiovascular complications due to alcohol consumption were assigned into the alcoholic group. The history of alcohol consumption or non-consumption based on selfreport was the basis for defining the case and control groups.24

The studied variables included age, sex, marital status, education, occupation, history of previous illnesses, type and amount of alcohol consumption, and duration of alcohol consumption in the two groups. Alcohol consumption was collected based on the used container and converted to milliliter (mL) on a daily, weekly, and monthly basis. Further, the variables of quality of life, general health, and spiritual health were measured and compared between the two groups.

A spiritual health questionnaire was designed in 2014 by Azizi et al,<sup>25</sup> which has been used in several studies, and its validity and reliability have also been approved. This questionnaire contains 48 items with three conceptual constructs of insight, tendency, and behavior as well as three sub-concepts (i.e., relationship with God, relationship with self, and relationship with the environment). This

subscale is scored using a five-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). The total score of this subscale ranges from 28 to 140 and is categorized as low (28-83) and high (84-140). For some items, the scoring method is reversed. The questionnaire is quantitative and increases with increasing spiritual health score, and it has no cutout point.<sup>25</sup>

The 12-item General Health Questionnaire (GHQ-12) was used to assess the general health of both groups. The method of scoring the questionnaire varied from 0 (optimal status) to 3 (unfavorable status). A study revealed that the GHQ-12 is valid and reliable for adjustment disorders with a Cronbach's a of 0.863. The sensitivity and specificity of adjustment disorders for GHQ-12 were 0.81 and 0.62, respectively, with the optimum cut-off point  $\geq 11$ based on the Likert-type scoring method.<sup>26,27</sup>

This study also employed a 12-item quality of life questionnaire the score of which ranges between 12 and 48 points. A high score indicates a higher quality of life. Montazeri et al examined the validity and reliability of this questionnaire in Iran. They reported the reliability of 0.73 and 0.72 for physical and psychological components of the questionnaire, respectively.28

The patients entered the study with informed consent. Regarding the manner of completing the questionnaire forms, it is worth mentioning that it was done through conducting face-to-face interviews. In addition, this study was licensed by the Research Ethics Committee of Shahrekord University of Medical Sciences.

This study used descriptive (mean, standard deviation, frequency, and percentage) and analytic statistics (independent *t* test and chi-square test). The collected data were analyzed using statistical software and calculated the odds ratio (OR) with 95% confidence interval (CI) by logistic regression models for calculated crude and adjusted OR. A P-value less than 0.05 was considered significant.

# Results

The results revealed that the age mean and standard deviation of alcohol consumers and the non- alcoholic group were  $41\pm15$  and  $45\pm16$  years, respectively (P=0.006). Descriptive analysis and comparison of study variables in total as well as for alcoholic and non-alcoholic groups are reported in Table 1.

Table 2 displays the pattern, mean, standard deviation, and minimum, and maximum of the variables related to alcohol consumption.

In the current study, the onset of consumption among 116 alcohol consumers (77.33%) was among friends and family. The time of consumption in 19 consumers (12.67%) was related to particular ceremonies such as birthday party.

The family members of 70 consumers (46.67%) were also alcohol consumers, and the families of 86 consumers (56%) were aware of their alcohol consumption. Furthermore, 68 consumers (45.30%) consumed alcohol made by hand, 45 consumers (30%) consumed alcohol with more than

Table 1. Descriptive Statistics and Cor	nparison of Study Variables i	in Total, Alcoholic, and Non-alcoholic Groups
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M. 5.11.		Total	Alcoholic Group	Non-alcoholic Group	D1/ 1	
Variable		(N=450)		No. (%)	<i>P</i> Value	
Gender	Female	136 (30.2)	36 (24)	100 (33.33)	0.042	
	Male	314 (69.8)	114 (76)	200 (67.67)	0.042	
	Single	142 (31.5)	54 (36.5)	88 (29.3)		
Marital status	Married	232 (51.5)	65 (43.9)	167 (55.3)	0.00	
Maritai status	Widowed	57 (12.7)	22 (14.3)	35 (11.7)	0.08	
	Separated	19 (4.3)	9 (4.5)	10 (3.3)		
History of disease	Yes	117 (26)	40 (26.7)	77 (25.6)	0.82	
	No	333 (74)	110 (73.3)	223 (74.4)	0.82	
Education	Under diploma	136 (30.2)	32 (21.3)	104 (34.7)		
	Diploma	156 (34.7)	45 (30)	111 (37)	≤0.001	
	University	158 (35.1)	73 (48.7)	85 (28.3)		
	Student	43 (9.5)	19 (12.7)	24 (8)		
lob	Employee	351 (78)	113 (75.3)	238 (79.3)	0.146	
JOD	Unemployed	24 (5.4)	11 (7.3)	13 (4.3)	0.146	
	Housekeeper	32 (7.1)	7 (4.7)	25 (8.4)		
Age (years) (Mean $\pm$ SD)		44±16	41±15	45±16	0.006	
Body mass index (Mean $\pm$ SD)		25.9±3	25.2±4	26.3±2	0.002	
Quality of life (Mean $\pm$ SD)		32±6	32.3±7	32.11±5	0.98	
General health (Mean $\pm$ SD)		29±5	29.8±5	29.3±4	0.296	
Spiritual health (Mean $\pm$ SD)		178.8±52	178.6±3.7	178±3.1	0.96	

 Table 2. Mean and Standard Deviation, Minimum and Maximum of the

 Variables Related to Alcohol Consumption Patterns in the Case Group

Variable	Mean	SD	Minimum	Maximum
Age of onset of consumption (year)	27.19	9.17	13	60
Dosage initially (mL)	144.60	168	30	1000
Dosage per time (mL)	164.30	188	30	1000
Dosage per day (mL)	154.40	232	20	1500
Dosage per week (mL)	637.80	1068	30	7000
Dosage per month (L)	2.94	5.50	0.5	50

Note: SD: Standard deviation.

30% concentration (e.g., vodka, whiskey, and gin), and 21 consumers (16%) consumed beer (see Table 3).

The frequency and the percentage of the causes of onset of alcohol consumption were attributed to curiosity (41.4%), social class and imitation of others (10%), and life problems (13.30%). According to Table 4, the causes of continued alcohol consumption were the interest in taste and smell in 33 consumers (22%), emotional problems and loneliness in 30 consumers (20%), and life problems in 19 consumers (12.60%).

The possibility of alcohol consumption was significantly higher in subjects with higher education (OR = 3.31, 95% CI: 1.52-7.20) as compared with reference group (P = 0.002). Likewise, the possibility of alcohol consumption was significantly higher in the out of province residents of Chahrmahal and Bakhtiari (OR = 6.90, 95% CI: 2.00-23.7) compared with reference group who are residing in Chahrmahal and Bakhtiari (P=0.002). Furthermore, the

Table 3. Frequency and Percentage of Variables Related to Alcohol Consumption

possibility of alcohol consumption was significantly higher in smokers compared with non- smokers (P<0.0001). Crude and adjusted OR with 95% CI for related alcohol consumption are presented in Table 5.

### Discussion

In the present study, the consumption pattern of alcoholic beverages and related risk factors were investigated in patients referring to the referral hospitals. It was found that higher education was among the most important risk factors for alcohol consumption, which is compatible with the results of a study conducted on people who had a high socioeconomic status in terms of education and were more likely to drink alcohol.<sup>22,23,24,29</sup> Furthermore, the results revealed a greater tendency to consume alcohol in people with freelance jobs, which can be attributed to the existence of strict employment laws such as non-consumption of alcohol for employees, teachers, and workers in Iran.

In this study, low mental health increased the tendency to use alcohol, which is consistent with studies that indicated a complex and well-known relationship between the tendency to alcohol consumption and an increased prevalence of psychiatric, personality, and psychological disorders. Some studies also displayed that teenagers and adolescents who scored higher on the Multi-Factor Emotional Intelligence Scale than others reported a very low consumption of alcoholic beverages.<sup>30</sup> This can be explained with regard to factors such as more substance use by people with mental disorders, reduced skills in coping with the use of drugs and alcohol following the

Variables		No. (%)
	With family and friends	116 (77.33)
Consumption ways	Alone	32 (21.33)
	No response	2 (1.4)
	Special ceremony	19 (12.67)
Consumption time	Without Special ceremony	130 (86.67)
	No response	1 (0.67)
	Yes	70 (46.67)
Consumption of family members	No	79 (52.67)
	No response	1 (0.67)
Aware of family about alcohol consumption	Yes	84 (56)
	No	66 (44)
	Yes	63 (42)
Referring to physician due to problems of substance use	No	87 (58)
	Beer	21 (16)
	Vodka, whiskey, and gin	45 (30)
	Handmade alcohol	68 (45.30)
<b>T</b> (1.1.1	Others cases	2 (1.30)
Type of alcohol	Beer and handmade alcohol	6 (4)
	Vodka, Whiskey, gin + handmade alcohol	4 (2.67)
	Beer, vodka, whiskey, gin + handmade alcohol	3 (2)
	Beer, vodka, whiskey, gin + handmade alcohol and others	1 (0.67)

Table 4. Frequency and Percentage of Causes of Onset and Continued Alcohol Consumption

Variable -	Cause of Alcohol Onset	The Cause of Continued Alcohol Consumption		
variable	No. (%)	No. (%)		
Curiosity	62 (41.40)	0 (0)		
Interest for taste and smell	11 (7.30)	33 (22.00)		
Life problems	23 (13.30)	19 (12.60)		
Emotional problems and loneliness	13 (8.66)	30 (20)		
Social class and imitation of others	15 (10.00)	11 (7.30)		
Medical reasons with recommendation of medical officers	1 (0.60)	0 (0)		
Medical reasons with a non-physician recommendation	5 (3.30)	5 (3.40)		
Other causes (unreasonable, euphoria, relaxation, and the like)	20 (13.4)	52 (34.70)		
Total	150 (100)	150 (100)		

Table 5. Crude and Adjusted OR With 95% CI for Related Alcohol Consumption

Variables	Level	OR Crude (95% CI)	P Value	OR Adjusted (95% CI)	P Value
Gender	Female	Reference	-	Reference	-
	Male	1.58 (1.01-2.47)		1.41 (0.73-2.74)	
Age (years)		0.98 (0.97-0.99)	0.007	0.98 (0.96-1.01)	0.389
N 91	Married	Reference	-	Reference	-
	Single	1.5 (1.00-2.42)	0.05	0.68 (0.32-1.40)	0.300
Marital status	Widowed	1.66 (0.90-3.05)	0.101	2.28 (0.95-5.45)	0.063
	Separated	2.31 (0.89-5.94)	0.082	1.50 (0.41-5.58)	0.523
	Under diploma	Reference	-	Reference	-
Education	Diploma	1.34 (0.79-2.28)	0.269	1.22 (0.55-2.68)	0.394
	University	2.95 (1.77-4.91)	0.001	3.31 (1.52-7.20)	0.002
	Employee	Reference	-	Reference	-
Job	Student	1.65 (0.86-3.14)	0.125	1.83 (0.75-4.42)	0.178
100	Unemployed	1.64 (0.72-3.72)	0.237	1.63 (0.52-5.07)	0.394
	Housekeeper	0.56 (0.23-1.33)	0.192	0.65 (0.16-2.66)	0.559
The history of disease	No	Reference	-	Reference	-
The history of disease	Yes	1.07 (0.68-1.67)	0.761	1.45 (0.77-2.69)	0.240
Cigarette consumption	No	Reference	-	Reference	-
Cigarette consumption	Yes	79.06 (18.9-330)	≤0.001	165 (35-778)	0.0001
	In center of province	Reference	-	Reference	-
Residence type in province of Chahrmahal and Bakhtiari	In districts	1.12 (0.74-1.69)	0.586	1.56 (0.89 – 2.74)	0.118
	Out of province	9.5 (3.45-26.50)	≤0.001	6.90 (2.00-23.7)	0.002
	Believed	Reference	-	Reference	-
Religious belief	Conventional	2.39 (1.55-3.69)	≤0.001	3.25 (1.80-5.86)	0.001
	Not believe	2.04 (1.08-3.85)	0.026	2.37 (0.98-5.75)	0.055
Body mass index	Score	091 (0.86-0.97)	0.003	0.87 (0.80-0.95)	0.002
Quality of life	Score	1.00 (0.97-1.03)	0.980	-	-
General health	Score	1.02 (0.98-1.06)	0.296	1.01 (0.95-1.06)	0.684
Spiritual health	Score	0.99 (0.99-1.00)	0.961	-	-

Note. OR: Odds ratio; CI: Confidence interval.

existing mental disorder, and thus the ease of tendency to them.  $^{\rm 29,31}$ 

The present study indicated a negative relationship between smoking and alcohol consumption, which is not consistent with studies that demonstrated a positive relationship between alcohol consumption, consumption pattern, and smoking behaviors. These studies have revealed that the behavioral and biological mechanisms of nicotine metabolism play a role in this regard, and recent re-smoking factors include recent alcohol consumption, along with stress.<sup>32-35</sup> One of the reasons for the inconsistency of the results of the present study and other mentioned studies is the cultural differences in dealing with individuals' stress in society so that some people traditionally turn to cigarettes, which have less religious and social taboos.

In the present study, it was observed that the reasons for starting alcohol consumption were curiosity, social class and imitation of others, as well as life problems in 41.40%, 17.40%, and 17.40% of cases, respectively. Furthermore, reasons for continued alcohol consumption included interest in taste and smell (23.30%) and emotional problems and loneliness (20%). This can be explained in light of the studies which reported that the mismanagement of excitement and adventure had an effect on the tendency to drink alcoholic beverages, and the factors such as pleasure and enjoyment played a considerable role in alcohol consumption. On the one hand, emotional dysregulation seemed to increase the risk of seeking pleasure in such a way that such people use alcohol or drugs for pleasure and for relieving the monotony, on the other hand, they reduce the risks and negative consequences of the tendency to such behaviors to themselves and underestimate them. They consider themselves strong and safe from these dangers with irrational thoughts such as recreational and temporary consumption.16,36

In the present study, 77.33% of friends and family members consumed alcoholic beverages. Consumption time in 12.67% was related to a special occasion. In 46.67%, the rest of the family members also consumed alcohol. Furthermore, 56% of households were aware of alcohol use, and 42% referred to a doctor due to problems caused by alcohol consumption.

In this regard, it should be noted that dysfunctional family characteristics can predict the severity of alcohol and drug use disorders. The family, as the first influential source in childhood and adolescence, has a decisive effect on a person's decision to engage in risky behaviors. Parenting practices and parental health influence the occurrence of risky behaviors. The role of poor quality relationships with parents as a risk factor is also emphasized.<sup>37</sup> Further, substance use in one parent as a model for child increases the chances of substance use in the child.<sup>38</sup>

The obtained results indicated that 45.30% of consumers consumed homemade drinks, which was due to the legal ban on buying and selling alcoholic beverages and lack of easy access to factory-made beverages. This is one of the reasons for the high prevalence of methanol poisoning in our society.

It is worthwhile to say that 30% of alcoholic beverages contained alcohol more than 30% (e.g., vodka, whiskey, and gin), indicating that the percentage of alcohol consumption in our society is high.

In this study, gender was not a risk factor for alcohol consumption. According to studies, boys may have consumed at least one type of substance including alcohol, cigarettes, or other substances more than girls in the past year.<sup>22,24,39,40</sup>. However, in recent years, the gap between the genders in alcohol and drug use has decreased.<sup>28</sup> The lack of significant differences between gender and alcohol consumption in our study also indicates the reduction

of cultural differences regarding gender in the current society.

In addition, the lack of age effect on the tendency to consume alcohol in the present study may be associated with the characteristics of the statistical population, which were the hospitalized people. Contrary to the traditional beliefs of the Iranian society, older people were not ashamed of reporting alcohol consumption for better diagnosis and medical interventions and told the truth to the physician and researcher.

Although marital status did not affect alcohol consumption in this study, some studies have reported that married people have consumed less than single people.<sup>22,38</sup> The results of these studies are not consistent with the results of the present study. To justify this, it can be said that single people examined in the present study had more severe symptoms, and they paid more attention to their health similar to married people. In this study, gender, age, marital status, disease history, quality of life, and spiritual health were not found to be among the risk factors for alcohol consumption.

The result of the lack of relationship between the history of the disease and alcohol consumption in this study can be due to the negative attitude of most members of the medical staff towards the positive effect of alcohol consumption in improving diseases and maintaining health.

Moreover, quality of life was not a risk factor for alcohol consumption, which can be due to the fact that pleasure and enjoyment played the most significant roles in alcohol consumption.

Furthermore, spiritual health was not a risk factor for alcohol consumption in the present study. Various studies refer to religious beliefs as a shield against substance dependence, and a negative relationship has been also observed between a person's level of religiosity and the tendency to use drugs and alcohol.<sup>37,41</sup> In a study by Holt et al, the deterrent role of religious beliefs is emphasized in the tendency to delinquency and alcohol consumption.<sup>42</sup> Religion, as a broad structure consisting of many programs to guide human beings, contains elements of self-control because it has the potential to provide self-control and refrain individuals from certain behaviors by providing one with specific moral guidelines and rules. Religion can also lead to healthier and more desirable personality structures in the process of acquisition and internalization.

In this study, the lack of relationship between spiritual health and alcohol consumption may be due to the different tools used by the present study and other studies for measuring spiritual health and religious beliefs. On the other hand, changes in people's perceptions of religion and adherence to its commands in recent years in society may be another reason. In another study, consumers believed that Islam was not too strict regarding alcohol consumption, and that they had a misunderstanding of the prohibition of income from the purchase and sale of alcoholic beverages.<sup>43</sup>

# Conclusion

The results of the present study revealed that curiosity is an important reason for starting alcohol consumption, and poor general health is an important determinant of alcohol consumption, while spiritual health exert no effect on it. According to the Islamic culture and the laws of society, which do not allow the consumption of any amount of alcohol, one of the limitations of the present study is the lack of a clear distinction between alcohol abuse and alcoholism. Due to the social and political limitations regarding the collection of alcohol consumption patterns, the results of this study cannot be generalized to the entire society, except to the population of patients referred to the mentioned hospitals. Furthermore, since this study is cross-sectional, it is not possible to accurately infer the causal relationships.

Given that alcohol consumption is a factor endangering the health of the individual and society, various comprehensive studies should be investigated in order to identify risk factors associated with drugs abuse and alcoholism, and prevention programs should be held.

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## **Conflict of Interest Disclosures**

The authors declare that they have no conflict of interests.

#### **Ethical Approval**

This study was approved by the Ethics Committee of Shahrekord University of Medical Sciences (Ref. No: IR.SKUMS.REC.1396.146).

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