

Frequency of alcohol consumption by patients hospitalized in a general hospital in Iran

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ABSTRACT

This study aim to assess the frequency of alcohol consumption in 536 patients hospitalized in a general hospital during 2014. The Alcohol Use Disorders Identification Test (AUDIT-C) questionnaire was used to identify alcohol consumption. The cut-off point for heavy alcohol consumption was 4 in males and 3 in females. P less than 0.05 was considered statistically significant. The mean age of patients was 46.93 years; 43.8% were males and 56.2% were females; 20% were single, 67.5% were married and 12.5% were divorced or widowed. The frequency of alcohol consumption in the previous year was 12.9% among patients. The highest frequency was noted in patients hospitalized in the Psychiatric Ward (25.6%) and the lowest frequency was reported by patients hospitalized in the Gynecology Ward (3.2%). Alcohol consumption has a considerably high frequency among hospitalized patients. Considering its effect on the morbidity and mortality, knowledge in this regard can help in better management of conditions, enhance the efficacy of treatment of patients and decrease the related costs by shortening the hospitalization period. Further studies are required to cast a definite judgment in this respect.

INTRODUCTION

Addiction is a social dilemma affecting different aspects of life. Addictive substances are many and alcohol is one of them (Ghanbari *et al.*, 2016). Excessive alcohol consumption has adverse health consequences. Room showed that alcohol consumption caused significant social harm (Room, 2000). It also increases the risk of diseases and adversely affects health. Boffetta and Hashibe demonstrated that alcohol consumption increased the likelihood of cancer (Boffetta and Hashibe, 2006). Turati *et al.* showed a minimum of three-fold increase in the risk of oral and pharyngeal cancers in alcohol drinkers (Turati *et al.*, 2013). Liver damage and cirrhosis are among the many other adverse health consequences of excessive alcohol consumption.

Razvodovsky showed that alcohol consumption by males and females increased the mortality rate due to cirrhosis (Razvodovsky, 2014). A positive history of alcohol consumption may cause complications in hospitalized patients such as the occurrence of alcohol withdrawal syndrome and its related symptoms such as seizure, prolonged hospitalization, increased risk of infection and bleeding (post-operatively) and increased likelihood of concomitant cardiovascular and gastrointestinal diseases. In general, it can be stated that history of alcohol consumption may increase the need for ICU admission and impose high costs on patients. Williams *et al.* evaluated 153 orthopedic patients and showed that alcohol consumption resulted in considerable medical and behavioral complications post-operatively (Williams *et al.*, 2008).

In some cases, due to non-compliance to post-operative instructions, specific conditions occurred that necessitated a second surgery. Eliasen *et al.* reported that alcohol consumption preoperatively increased general morbidity and delayed surgical wound healing post-operatively (Eliasen *et al.*, 2013).

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Gocouin *et al.* assessed 358 ICU patients and indicated that alcohol consumption increased the likelihood of hospital-acquired infections (Gacouin *et al.*, 2008). Delgado-Rodriguez *et al.*, in their study on 1505 patients hospitalized in the surgical wards revealed that history of heavy alcohol consumption preoperatively was significantly correlated with increased risk of nosocomial infections post-operatively (Delgado-Rodríguez *et al.*, 2003).

It seems that alcohol consumption increases the risk of morbidity and mortality in hospitalized patients. This study sought to assess the frequency of alcohol consumption in patients hospitalized in a general hospital to enhance the knowledge of clinicians about the frequency of alcohol consumption in hospitalized patients.

MATERIALS AND METHODS

In this descriptive cross-sectional study, patients were selected using convenience sampling. In other words, all patients hospitalized in the wards of Taleghani Hospital in Tehran in 2014 were entered in the study. The ICU, CCU (due to severe condition of patients), NICU and pediatric ward (due to young age of patients) were excluded. A total of 536 patients hospitalized in 11 hospital wards comprised the sample size of this study; of these patients, 235 were males and 301 were females.

The AUDIT-C questionnaire was used to identify alcohol consumption by patients. This questionnaire has been recommended by the World Health Organization (WHO) to estimate the frequency of alcohol consumption (Babor *et al.*, 2006; Bush *et al.*, 1998) and contains three five-choice questions, which were asked verbally by the researcher from the patients and the answers were recorded. Prior to questioning, patients were asked to sign written informed consent forms and were ensured about the confidentiality of their information. Patients' age, sex, literacy and marital status were all recorded in the demographic section of the questionnaire.

The validity and reliability of this questionnaire have been confirmed in previous studies (Källmén, *et al.*, 2014; Rumpf *et al.*, 2012). The scores acquired by patients varied from 1 to 12. Scores 4 and higher in males and scores 3 and higher in females indicated heavy consumption of alcohol. The afore-mentioned cut-off points were selected according to a study by Bradley *et al* (Bradley *et al.*, 2007).

Ethical consideration

The study followed the principles of the declaration of Helsinki and was approved by the Medical Ethics Review Board of Shahid Beheshti University of Medical Sciences.

All information about the patients was fully kept confidential, also all information will be released as a group without participants' name. Study participants did not incur any costs and the study protocol did not have any harm to participants. The written informed consent was obtained from volunteers and details and purpose of the study were disclosed.

Statistical analysis

Statistical analyses were done by using the program SPSS version 17.0 (SPSS, Inc., Chicago, IL, USA). ANOVA test was used to compare qualitative variables among the groups. The results are expressed as a mean± standard deviation (SD), and/or range (minimum–maximum). P values less than 0.05 were considered statistically significant.

RESULTS

Of patients, 43.8% were males and 56.2% were females; 20% were single, 67.5% were married and 12.5% were divorced or widowed. In terms of literacy, 19.6% were illiterate and the remaining patients were literate (from elementary school education to university degree). The mean age of patients was 46.93 years (range 15 to 93 years). The frequency of alcohol consumption among patients was 12.9% in the previous year. Table 1 shows the frequency percentages of heavy and light alcohol consumption in patients.

Table 1: The frequency distribution of alcohol consumption in patients.

Alcohol consumption	Number	Percentage
Never	467	87.1
Light consumption	44	8.2
Heavy consumption	25	4.7

Of 235 males, 55 (23.4%) reported alcohol consumption in the past year. This rate was 14 (4.7%) out of 301 females. The correlation of alcohol consumption with sex was statistically significant ($P<0.05$). Also, heavy alcohol consumption was more common among males and 8.9% of males reported heavy drinking in the past year; this rate was 1.3% among females. The relationship of heavy drinking and sex was also statistically significant ($P<0.05$). Figure 1 shows the frequency of alcohol consumption in the past year (irrespective of the frequency and intensity of use) by patients hospitalized in different hospital wards.

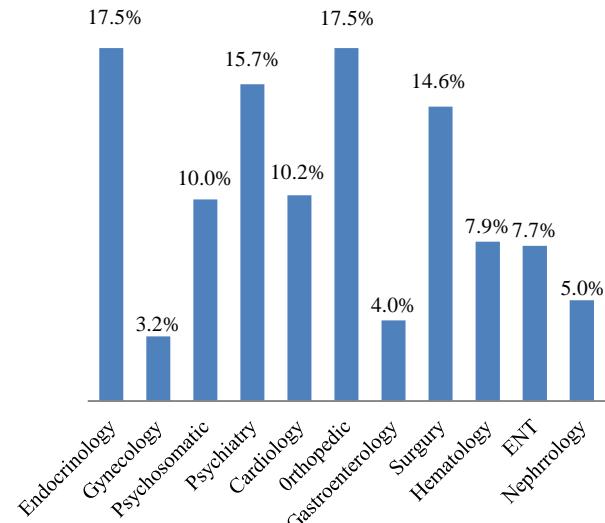


Fig. 1: The frequency distribution of alcohol consumption (irrespective of the intensity of use) by patients hospitalized in different hospital wards

As seen in Figure-1, patients hospitalized in the Psychiatric Ward had the highest (25.7%) and those hospitalized in the Gynecology Ward had the lowest (3.2%) frequency of alcohol consumption ($P<0.005$). Figure-2 shows the frequency of heavy alcohol consumption in the past year by patients hospitalized in different hospital wards.

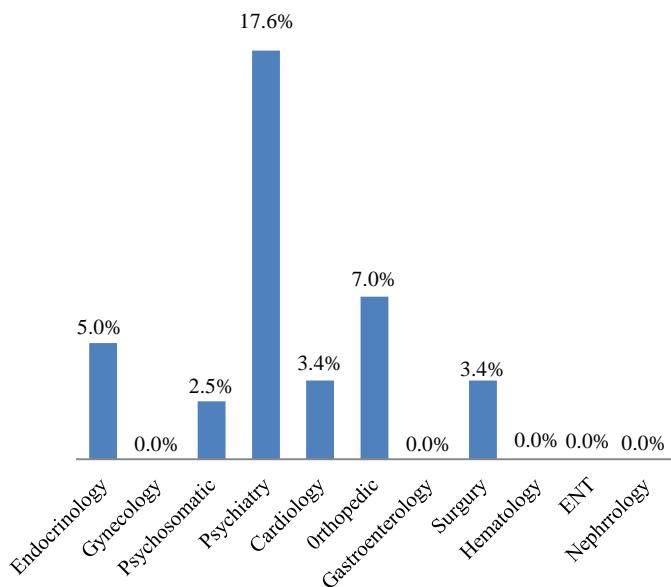


Fig. 2: The frequency distribution of heavy alcohol consumption by patients hospitalized in different hospital wards

As noted in Figure-2, the Psychiatric Ward ranked first (17.6%) and the Orthopedic Ward ranked second in terms of the frequency of heavy drinkers in the past year ($P<0.005$).

DISCUSSION

This study revealed that 12.9% of hospitalized patients had alcohol consumption in the past year. No accurate statistics are available regarding the prevalence of alcohol consumption by the general population of Iran to compare it with the prevalence rate obtained in the current study. However, Hamdieh *et al.*, in their study on 8,175 subjects randomly selected among the residents of 22 cities in Iran reported the prevalence of alcohol consumption to be 25.7% (Mustafa *et al.*, 2010). They used a researcher-designed questionnaire in their study to collect data. Limited studies have evaluated the frequency and history of alcohol consumption in hospitalized patients. Azarasa *et al.* evaluated 600 patients hospitalized in a hospital in northwest of Iran and reported the frequency of alcohol consumption to be 8.1%. No comparison was made in the frequency of consumption among patients hospitalized in different hospital wards (Azarasa *et al.*, 2009). They used a researcher-designed questionnaire to collect data in their study.

Attar *et al.* evaluated 571 patients hospitalized in Hazrat-e-Rasoul Hospital in Tehran and reported the frequency of alcohol consumption to be 9.6% among patients (Attar *et al.*, 2004). In their study, the highest frequency belonged to patients hospitalized in the Orthopedic Ward (25.3%) and the Psychiatric Ward ranked

second in terms of frequency of alcohol consumption by patients (13.3%). However, in our study the highest frequency of alcohol consumption belonged to patients hospitalized in the Psychiatric Ward. They used a researcher-designed questionnaire in their study.

Safa *et al.* evaluated 66 patients who were candidates for transplant surgery in Masih Daneshvari Hospital and reported that $\frac{1}{3}$ of patients gave a positive history of alcohol consumption (Safa *et al.*, 2013). However, they did not evaluate the frequency of alcohol consumption by patients in different hospital wards. Data collection tool in their study was the Addiction Severity Index (ASI). Future studies are required on larger sample sizes to obtain more accurate information regarding the prevalence of alcohol consumption among patients.

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