



Alcohol Use Among Homeless Men in Tehran, Iran: Risk and Protective Factors

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Abstract

Background: Alcohol use is one of the most complicated health problems. The understanding of risk and protective factors contributing to alcohol use could help deal with this problem more efficiently.

Objectives: The present study examined the risk and protective factors for alcohol use among homeless men living in Tehran, Iran.

Methods: This cross-sectional study was conducted from September to November 2015. A total of 193 homeless men were recruited using convenience sampling from Khavaran Shelter, the largest shelter for homeless people, in the south of Tehran. Data were analyzed using a logistic regression model to examine if using alcohol is associated with potential risk and protective factors. Conducting logistic regression, adjusted odds ratio (aOR) point estimate and 95% confidence interval (CI 95%) as the effect measures were reported. All tests were run using SPSS version 21.

Results: The prevalence rates of recent (past 7 days) and past-year alcohol use were 14.5% (95% CI: 9.50, 19.50) and 43.52% (95% CI: 36.50, 50.50), respectively. Hosmer-Lemeshow test ($\chi^2(4) = 10.37, P = 0.17$) indicated the goodness of fit of the model to the data. The results of the fitted logistic regression model explained that social support (OR = 0.63, CI 95%: 0.36-1.08) and being a local resident (OR = 0.32, CI 95%: 0.17 - 0.61) were the protective factors while the level of relationship with peer network (OR = 2.08, CI 95%: 1.19 - 3.63) and having a history of arrest (OR = 3.16, CI 95%: 1.34 - 7.46) were risk factors of alcohol use among Iranian homeless men during the last year. The predictors entered into the regression model could explain between 13% and 17.5% of the variance of the outcome (alcohol use).

Conclusions: This study contributes to the existing literature by examining risk and protective factors among a high-risk population. Our findings can be used in designing and implementing interventions that are more effective for the homeless group living in a non-Western context.

Keywords: Alcohol Use, Homeless Persons, Protective Factors, Risk Factors, Social Support

1. Background

Alcohol is one of the most important health concerns around the world, which may cause non-communicable diseases (1, 2). Monitoring of the trend of alcohol use is one of the priorities of health policy and planning systems (3, 4). Although drinking and trading of alcohol are illegal in Iran, the issue of alcohol use is significant (3). Because of being illegal, alcohol use can be considered a hidden problem and therefore, there is limited evidence of alcohol use in the country.

Alcohol and drug use are commonly reported by homeless populations (5). The homeless are referred to those

without any house or permanent shelter for sleeping (6). Homeless individuals who use alcohol and drug constitute one of the most marginalized groups in Iran (5). They are considered a high-risk population for mental health issues and alcohol consumption and substance abuse are common among them (7-10). In a meta-analysis conducted by Fazel et al. 29 studies with 5,684 homeless individuals were considered. They found that the prevalence of alcohol dependence was between 8.1% and 58.5% among homeless individuals. Studies examined in this meta-analysis mainly focused on homeless men in Western context. It is critical to conduct studies in non-Western countries such as Iran

to address this gap in the existing literature. Therefore, due to the importance of alcohol use among homeless people, the authors conducted this analytical study to examine the factors associated with alcohol use among the homeless in the south of Tehran, Iran. Based on the literature review, the factors examined included peer network, social support, age, history of arrest and incarceration, marital status, employment status, and immigration status.

1.1. Alcohol Consumption in Iran

As mentioned before, it is hardly possible to accurately estimate the prevalence of alcohol use in Iran due to social stigmatization and legal restrictions. Studies implemented in Iran reported different prevalence rates of alcohol use for various groups ranging from 2% (11) to 26.65% (12) for lifetime consumption.

According to a national survey conducted in Iran (3), men, university students, and people aged 18 to 30 are more likely to consume alcohol (1, 3). In addition, according to a study conducted among 5,231 Iranian university students, alcohol consumption was reported as the most common substance used among this group (1). Regional analysis indicated that university students in some provinces including Fars, Isfahan, Kurdistan, Yazd, Tehran, Zanjan, and Golestan were at a higher risk of alcohol consumption (1, 3).

Some literature investigated risky behaviors among homeless people (13-15); however, risk and protective factors associated with alcohol use among homeless people are understudied, especially in the Iranian context.

2. Objectives

The present study aimed to determine the prevalence of alcohol use and its associated risk and protective factors among homeless men in Tehran, Iran.

3. Materials and Methods

3.1. Study Procedures

This cross-sectional study was conducted from September to November 2015 in Tehran. We recruited 193 homeless people using convenience sampling from *Khavaran Shelter*, the largest shelter for homeless people, in the south of Tehran. *Khavaran* is a permanent accommodation center for homeless people in this city with an area of 5,000 m². Its reception capacity is 400 people, but in the cold season, it will increase up to 700 people. It offers health, counseling, and referral services, and provides clothes, breakfast, and hot meals.

The inclusion criteria included being a male, aged 18 or above, and having the ability to understand and respond to the questionnaire. Trained interviewers administered the questionnaire.

3.2. Ethical Considerations

Participation in the study was voluntary and no compensation was provided for responding to the survey. In the beginning, the interviewer provided oral detailed information on the purpose of the study for participants and then, if one was interested to participate, a written consent form was provided by the research team. Having the form signed by the participant, the person took part in the study.

3.3. Measures

Data were collected using a questionnaire including a demographic checklist, the multidimensional scale of perceived social support (MPSS), and a researcher-designed peer network scale. The demographic checklist consisted of age, marital status, employment status, immigration status, and history of arrest and incarceration (as independent variables in logistic regression). Two questions were included in the survey to measure self-reported alcohol use in the past 7 days and in the last year (as outcome variables in logistic regression). These questions were to ask if one consumed alcohol in the given period of time, regardless of its quantity and the type of alcohol dependence.

The MPSS (16) is a self-report scale with 12 items. It was developed to assess perceived social support. Three sources of support including family, friends, and significant others are considered in the MPSS. A 7-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree) was used for each item. The mean score of each source of support was calculated. Higher mean scores indicated greater levels of perceived social support from that specific source. The validity and reliability of the English version and the Persian version of the questionnaire were confirmed by Zimet et al. (16) and Bagherian-Sararoudi et al., respectively (17). Internal consistency of the questionnaire in the current study was strong (Cronbach's alpha of 0.79).

The risky peer network scale, developed by the researchers, was a single-item measure. The scale measured the level of interactions with other homeless men using a six-point Likert scale. The responses were rated from 1 (without communication) to 6 (daily communication). Higher scores indicated higher levels of communication with risky peer network.

3.4. Data Analysis

Bivariate association between demographic variables and alcohol use was examined using simple logistic regression. Then, all variables were included in a multiple logistic regression model (forward: LR). Conducting this statistical test, adjusted odds ratios (aOR) with 95% confidence interval (CI 95%) were reported. Hosmer and Lemeshow's X-squared, Cox and Snell's R square, and Nagelkerke's R square values were used for examining the model fit and explaining the total variance of outcome variable by predictors. All tests were run using SPSS version 21.

4. Results

4.1. Descriptive Statistics

The mean \pm standard deviation (SD) of participants' age was 47.35 ± 11.12 years. Thirty-three (17.13%) of them were married. Around 52% were immigrants and 79.8% had a history of arrest. The prevalence rates of recent alcohol use (in past 7 days) and last-year alcohol use were 14.5% (95% CI: 9.50, 19.50) and 43.52% (95% CI: 36.50, 50.50), respectively. The mean score of social support was 1.59 (SD = 0.64), indicating inadequate social support. In addition, the mean score of interaction level with peer network was 1.66 (SD = 0.71), representing a low level of communication with other homeless men. Table 1 shows the descriptive characteristics of the participants.

4.2. Risk and Protective Factors

Applying simple logistic regression, bivariate analyses were conducted to assess the relationship between potential independent variables and alcohol use (Table 2). The significant variables (i.e., all variables except for age, employment status, and marital status) were entered into a multiple logistic regression model.

The predictors entered into the regression model could explain between 13% and 17.5% of the variance of the outcome based on Cox and Snell's R square and Nagelkerke's R square methods, respectively. Hosmer-Lemeshow test of the goodness of fit demonstrated that the model fitted the data well ($\chi^2(4) = 10.37, P = 0.17$). The logistic regression results indicated that social support, immigration status, peer network, and history of arrest were significant factors in association with alcohol use. That is, social support (OR = 0.63, CI 95%: 0.36 - 1.08) and being local resident (OR = 0.32, CI 95%: 0.17 - 0.606) were protective factors, while the level of interaction with peer network (OR = 2.08, CI 95%: 1.19 - 3.63) and having a history of arrest (OR = 3.16, CI 95%: 1.34 - 7.46) were the risk factors of alcohol use among Iranian homeless men during the last year (Table 3). These results explained that non-immigrant homeless

Table 1. Descriptive Statistics of the Participants

Variables	No. (%)
Age, y	
15 - 25	18 (9.3)
26 - 35	34 (17.6)
36 - 45	98 (50.8)
46 or over	43 (22.3)
Marital status	
Married	33 (17.1)
Single	160 (82.9)
Employment status	
Employed	118 (60.4)
Unemployed	75 (39.6)
History of arrest	
Yes	154 (79.8)
No	39 (20.2)
History of incarceration	
Yes	114 (59.1)
No	79 (40.9)
Last-year alcohol use	
Yes	84 (43.52)
No	109 (56.48)
Recent alcohol use (past 7 days)	
Yes	28 (14.5)
No	165 (85.5)

men were 0.32 times less likely to use alcohol compared to immigrants. Those with higher levels of relationship with other homeless people were 2.08 times more likely to consume alcohol. Finally, those with a history of arrest were 3.16 times more likely to use alcohol.

5. Discussion

The results showed that the prevalence of last-year alcohol use was 43.52% among homeless men in Tehran, Iran. This high prevalence of self-reported alcohol use was similar to what reported in studies implemented in other countries. A study in Poland found that 75% of homeless people in Olsztyn were dependent on alcohol (9). Another study in Madrid reported that 59% of homeless men consumed excessive alcohol at some point in their lives (18). People who are homeless often turn to drugs and alcohol to cope with their situations. They use substances in an attempt to attain temporary relief from their problems.

Table 2. Bivariate Analysis of Variables Associated With Alcohol Use (N = 193)

Variables	Alcohol Use		P Value
	No (N = 109)	Yes (N = 84)	
Marital status			0.88
Single	90 (82.6)	70 (83.3)	
Married	19 (17.4)	14 (16.7)	
Immigration status			0.004
No	42 (38.5)	50 (59.5)	
Yes	67 (61.5)	34 (40.5)	
History of arrest			0.004
No	30 (27.5)	9 (10.7)	
Yes	79 (72.5)	75 (89.3)	
History of incarceration			0.006
No	54 (49.5)	25 (29.8)	
Yes	55 (50.5)	59 (70.2)	
Employment			0.77
Unemployed	64 (58.7)	51 (60.7)	
Employed	45 (41.3)	33 (39.3)	
Peer network	1.62 ± 0.72	1.71 ± 0.70	0.001
Perceived social support	1.62 ± 0.66	1.55 ± 0.60	0.01
Age	47.75 ± 11.57	46.83 ± 10.56	0.63

^aValues are expressed as No. (%) or mean ± SD.

Table 3. Logistic Regression Model Results for Determining the Effect of Possible Factors on Alcohol Use (N = 193)

	B	SE	Wald Test	OR	P Value	OR (95% CI)	
						Lower	Upper
Perceived social support	-0.447	0.276	2.61	0.627	0.091	0.365	1.078
History of arrest	0.996	0.438	3.76	3.159	0.009	1.338	7.458
Being local resident	-1.020	0.325	10.38	0.322	0.000	0.170	0.609
Peer network	0.471	0.284	3.59	2.081	0.010	1.192	3.632

Abbreviations: CI, confidence interval; OR, odds ratio; SE, standard error.

The results of this study revealed that there was a significant association between low social support and self-reported alcohol use. Many people who are homeless might not have access to sufficient social support (19). Studies show that a reliable network of family support serves a protective factor against hardships and difficulties (5). However, homeless people have often a limited support system and networks (5).

Moreover, the findings showed that the history of arrest was a risk factor for alcohol use. This is consistent with previous studies explaining that alcohol consumption among the homeless population is associated with the risk of violence, victimization, and frequent looping be-

tween streets, jails, and shelters (20).

This study found a significant association between being an immigrant and alcohol use, which is consistent with the results of a study from Belgium (21). A study in Los Angeles reported more heavy drinking patterns in travelers than in non-travelers (22). The current study, also, indicated having a greater peer network would likely increase the rate of alcohol consumption among homeless people. Similarly, a study conducted a multivariate analysis and demonstrated a significant relationship between alcohol consumption and riskier peer networks (23).

This study has some limitations. For example, alcohol use is a sensitive topic, especially in the context of

Iran, because of legal restrictions and thus, respondents are less likely to report risky behaviors such as alcohol use in face-to-face interviews. As this study was designed cross-sectionally, the researchers were not able to examine the causal association between variables. Furthermore, the researchers studied male homeless participants, who received services from a public shelter; thus, the generalizability of the results to all homeless people living in Tehran should be done with caution. This kind of recruitment also limited the representativeness of the sample. However, this study remarkably contributed to the literature. To our knowledge, this is the first research conducted on alcohol use and its associated risk and protective factors among homeless people in Iran. The findings demonstrated a significant association between low social support, having a history of arrest, being an immigrant, and a greater relationship with peer network with self-reported alcohol use.

5.1. Conclusions

Considering the restrictions on the trade of alcoholic beverages and the punishment for alcohol use in Iran, the high prevalence of alcohol use among homeless men in Tehran is striking. The researchers identified several risk factors for alcohol use among this group, including low social support, having a history of arrest, being an immigrant, and a higher level of interaction with risky peer network. Implementation of prevention and treatment programs addressing these risk factors among homeless people in Tehran is a top priority.

Footnotes

Authors' Contribution: Seyed Hossein Mohaqeqi Kamal and Mehdi Basakha studied the concept and designed the manuscript. Sajjad Sajjadi collected and interpreted the data. Seyed Hossein Mohaqeqi Kamal, Mehdi Basakha and Gholamreza Ghaedamini Harouni drafted the manuscript. Seyed Hossein Mohaqeqi Kamal, Mehdi Basakha, Gholamreza Ghaedamini Harouni, Sara Makki Alamdari and Sajjad Sajjadi revision the manuscript critically. Seyed Hossein Mohaqeqi Kamal, Mehdi Basakha, Gholamreza Ghaedamini Harouni, Sara Makki Alamdari and Sajjad Sajjadi approved finally.

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