

Alcoholism Prevalence and Some Related Factors in Edirne, Turkey

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The aim of this research was to estimate the community prevalence of alcoholism and the potential risk factors that affect it in the Edirne provincial centre by using a scanning test.

A cross-sectional study was carried out in the Edirne provincial centre. A sample population composed of 500 women and 200 men was selected randomly after the categorisation of the population according to ethnicity, age and sex. Through face-to-face interviews, data collection sheets, which were prepared to analyse potential factors affecting alcoholism frequency, were filled in by the sample population. The Michigan Alcoholism Scanning Test (MAST) was employed.

According to MAST's normal grading, individuals with 5 or more points are evaluated as alcoholics. Accordingly, 8.2% of the sample population fit the definition of alcoholic. Alcoholism frequency was considerably higher in gypsies, the self-employed, smokers, and people with higher income. From logistic regression analysis alcoholism frequency was 12.4 times higher in men than in women, 3.2 times higher in gypsies than in others, 1.9 times higher in people who earned an income in the preceding week than in the unemployed, and 3.7 times higher in individuals who had smoked more than 100 cigarettes during their life or those who had smoked at least 1 cigarette for 3 months or for a longer period than in those who hadn't smoked any cigarettes.

The prevalence of alcoholism in the Edirne provincial centre was similar to that in other countries in Europe. The most important finding was that alcohol consumption decreased in the unemployed,

a finding that differs from that in other parts of the world. Gypsies, who differ in tradition, way of life, and job compared to the other strata of society, also suffered from higher alcohol consumption. This group usually consumed wine and generally

did not eat while drinking.

Key Words: Alcoholism prevalence, gypsies, michigan alcoholism scanning test, cigarette-alcohol, alcoholism scanning

INTRODUCTION

Alcohol has been used as a sedative, joy-giving anaesthetic and as medicine since ancient times. Throughout history, societies have shown different attitudes to alcohol. Some have used alcohol in religious ceremonies while some religions have prohibited alcohol. The problem related to alcohol consumption is one of the most important issues in our era. As alcoholism brings about health problems, traffic accidents, suicides, inclination towards crime, split families, economic problems, and corrupted business life, it has become a great psychosocial and economic issue. Alcoholism is an illness. Nevertheless, all drinkers are not ill.¹ There are different definitions according to the frequency and the amount of alcohol consumed by a person. For example, alcohol taken in a meeting, a party or taken in a small amount at home is defined as social drinking. Alcohol drinking which affects the drinker's family relations and business life negatively is defined as 'problem drinking'.²

In this scope alcoholism is a disorder with the symptoms of not being able to stop drinking excessively and it considerably harms an individual's physical and psychological health, his/her family, and social and business life adaptation. It is a problem mostly observed between the ages of 22-35 and also mostly among men.¹ Alcohol consumption frequency or the amount consumed depends on a good many factors such

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as socio-economic position, genetics, culture, race, ethnicity, and religious faith.³

Today alcohol consumption is a growing problem in parallel to economic development and is becoming a health problem in the USA and most parts of the world.⁴

Research conducted in the USA reveals that alcohol consumption has reached an epidemic extend: 10% of the people applying to a health centre and one out of ten death cases were related to alcohol consumption.⁵ In Turkey, 20% of the health expenses are spent on alcohol related diseases.

In the course of time, society gains consciousness and this causes primarily doctors and health officers to focus on this issue much more diligently. Previous studies indicate that 90% of alcoholics are not diagnosed which subsequently hinders early diagnosis and treatment, and therefore increases the mortality rate related to alcohol consumption.⁶ It is estimated that 5-10% of the US population is affected by alcoholism, although this frequency may alter according to scanning method or research group. Despite the fact that there are lots of scanning methods developed for this issue (MAST, CAGE, Trauma Scale, Brief MAST etc.), present day physicians mostly diagnose alcoholism in line with the knowledge they obtained during their university education.⁵ However, this type of questioning is not suitable for diagnosing alcoholism. What is common in these so called scanning tests is that they include questions clarifying the symptoms related to physical, psychological and social destruction originating from alcohol consumption in uncontrollably big amounts, which thereby makes it easier to diagnose alcoholism.

The methods employed by primary care physicians to determine those with an alcohol problem are based mostly on biochemical indicators and personal confessions and these tests are very useful for the cases involving advanced levels of organic and psychiatric problems. However, by this method it is difficult to determine the person who does not have apparent mental or physical problems.⁷

One of the important definitions related to alcohol consumption is harmful consumption. Although a person might not have distinct symp-

toms at the present time, he/she may carry a great risk in physical and psychological respects in the future. In the designation of harmful consumption, frequency and quantity measures are employed again. Another indicator for revealing the level of alcohol consumption among those applying to primary care physicians is based on familial, professional, and legal problems and injuries resulting from alcohol consumption and such drinkers are considered to be a risky group.⁷

In our country there have been very few studies on the frequency of alcoholism and effectual factors. Particularly, no study has been conducted using the Michigan Alcoholism Scanning Test (MAST). Nevertheless, it is considered that alcohol consumption is also an important problem for our country.

The purpose of this study is to determine the alcoholism prevalence and possible effectual factors for alcoholism in the Edirne provincial centre by using MAST.

MATERIALS AND METHODS

This was a cross-sectional study carried out in the Edirne provincial centre. According to 2001 population data of the Provincial Health Department of Edirne, 93,947 citizens in the 15-64 age group, 47,326 men and 46,021 women, live in the Edirne provincial centre. Because no research has been conducted using similar methods in our country, prevalence values were derived from the results of different studies in different parts of the world to determine the sample size. In these research studies the prevalence of alcoholism varies from 2% to 18%.⁸⁻¹⁵ When 13% prevalence, 5% deviation, and 95% confidence level for men, and 5% prevalence, 2% deviation and 95% confidence for women, were determined according to the available data, the total sample reached 700 people; 200 men and 500 women.

The sample population was selected randomly from 8 primary health care unit areas in the Edirne provincial centre after the categorisation of the population according to the ethnicity, age and sex.

Accordingly we had to conduct face-to-face interviews with 700 people in their homes. In

these interviews two kinds of forms were used: a form developed by the researchers to analyse the possible factors which may affect the demographic information and alcoholism frequency, and MAST whose validity and reliability were tested for Turkey.¹⁶ We used the MAST scale because in population based studies tools should be utilized that have been proofed in terms of reliability and validity in order to assess the prevalence of alcoholism in the general population. Although there have been many instruments within this field, reliability and validity assessments have only been conducted for the MAST inventory in Turkey.

In addition to this fact, as a screening tool, we also attempted to make a comparison with the other studies that have previously been done in Turkey; therefore, using MAST was an advantage. As in all screening tests, the possibility of falsification is the major disadvantage of MAST. Interviews were performed under the control of researchers by senior medical students trained on the subject. The collected data were processed with computers and discontinuous variables belonging to alcoholics, potential alcoholics and non-alcoholics (individuals scoring 5 or more points are regarded as alcoholics, 4 as potential alcoholics, and 3 or less as non-alcoholics) according to MAST were compared via chi square test, while continuous variables were compared via the test scaling the importance of the discrepancy between the two averages.

Additionally after categorisation of the two groups according to MAST score, some factors which might influence alcoholism were analysed by employing the stepwise logistic regression model. MINITAB Ver.13.1 (licence no: wcp 1331.00197) program package for Windows was used in all analyses.

RESULTS

The evaluation consisted of 645 people (45 people were excluded because of their missing data), 193 (29.9%) men and 452 (70.1%) woman. The age average of the group was 34.9 ± 12.7 . The general characteristics of the participants are presented in Table 1.

Of the 645 persons, 53 (8.2%) fit the definition of alcoholic and 7 (1.1%) that of potential alcoholic. The potential alcoholic group was not included in the quantitative analysis due to its small size.

When the prevalence of alcoholism was considered in terms of demographic characteristics it was found that the prevalence in gypsies was 18.9%. According to other categories, the prevalence of alcoholism was 23.3% in men, 23.4% in the self-employed, 56.6% among those married and 36% among high school graduates. When data were stratified by gender and in low-income group, the prevalence of alcoholism was assessed lower.

When cigarette consumption was examined, 98.1% of people in the alcoholic group had attempted to smoke, 94.3% had smoked for more than 3 months or smoked more than 100 cigarettes during their life and 89.6% were still smoking. The prevalence of alcoholism in the group who had smoked for more than 3 months or had smoked more than 100 cigarettes during their life was 11.4%. The comparison of the alcoholic and not alcoholic groups in respects of some of these variables, according to MAST, is presented in Table 2.

When the data given in the table were analysed, the alcoholism frequency was significantly higher in men than women, in gypsies than others, in people who earn income than the unemployed and in smokers than non-smokers (all $p < .001$). According to research findings there was no consistent relationship between marital status and level of education on the way to becoming alcoholic ($p > .05$). When gender and age effect were controlled, alcoholism prevalence was not altered by educational status.

After dividing the study group into 2 groups, alcoholics and non-alcoholics, according to the MAST scores, the associations between alcoholism and some of the potential risk factors were evaluated by Stepwise Logistic Regression Model. In the regression model being alcoholic (MAST scores ≥ 5) was taken as a dependent variable. Independent variables were set as age, sex, ethnicity, earning income in the preceding week and the condition of having smoked more than 100 cigarettes during his/her life or having smoked at

Table 1. General Characteristics of Participants (n=645)

Characteristics	No. of subjects	%
Gender		
Male	193	29.9
Female	452	70.1
Educational level		
Illiterate	60	9.3
Primary school	169	26.2
Secondary school	123	19.1
High school	229	35.5
College	64	9.9
Age (year)		
15-24	165	25.6
25-34	184	28.5
35-44	135	20.9
45-54	101	15.7
55-64	60	9.3
Smoke cigarettes during their life		
Yes	471	73.1
No	174	26.9
Marital status		
Unmarried	406	27.5
Married	177	62.9
Divorce	16	2.5
Widowed	46	7.1
Occupation		
Housewife	253	39.2
Self employed	111	17.2
State officer	99	15.3
Worker	26	4
Unemployed	29	4.5
Student	83	12.9
Retired	44	6.8
Earned income in the preceding week		
No	436	67.6
Yes	209	32.4
Have smoked for more than 3 months or smoked more than 100 cigarettes during their life		
No	438	67.9
Yes	207	32.1

Table 2. Prevalence of Alcoholism and Potential Risk Factors

Variables	Prevalence of alcoholism		χ^2	p
	No. of subjets	%		
Age (year)				
15-24	7	13.2		
25-34	17	32.1		
35-44	8	15.1	7.864	0.054
45-54	14	26.4		
55-64	7	13.2		
Gender				
Male	45/193	23.3	83.252	<.001
Female	8/452	1.8		
Marital status				
Unmarried	15/177	8.5		
Married	30/406	7.4	3.206	0.656
Divorce	5/24	20.8		
Widowed	3/38	7.9		
Ethnicity				
Turkish Gypsies	14/74	18.9	12.694	<.001
Others	39/517	6.8		
Education levels				
Illiterate	7/60	11.7		
Primary school	14/169	8.3		
Secondary school	7/123	5.7	2.104	0.717
High school	19/229	8.3		
College	6/64	9.4		
Occupation				
Housewife	0/253	0.0		
Self employed	26/111	23.4		
State officer	10/99	10.1		
Worker	3/26	11.5	59.946	<.001*
Unemployed	3/29	10.3		
Student	5/83	6.0		
Retired	6/38	13.6		
Earned income in the preceding week				
Yes	31/209	14.8	17.942	<.001
No	22/436	5.0		
Smoked cigarettes during their life				
Yes	52/471	11.0	18.338	<.001
No	1/173	0.6		
Have smoked for more than 3 months or smoked more than 100 cigarettes during their life				
Yes	50/438	11.4	18.513	<.001
No	3/207	1.4		

*Self employed persons have significantly higher alcoholism prevalence.

least 1 cigarette a week for 3 months or for a longer period. The results are shown in Table 3.

Accordingly, the prevalence of alcoholism was 12.4 times higher in men than women ($p < .001$), 3.2 times higher in gypsies than others, 1.9 times higher in people earning income in the preceding week than the unemployed, and 3.7 times higher in individuals who had smoked more than 100 cigarettes during their life or had smoked at least 1 cigarette for 3 months or for a longer period than those who hadn't smoked any cigarettes ($p < .05$). There was no significant association between alcoholism and age ($p > .05$). According to MAST's "alcoholic" classification, 7 out of the 53 alcoholics (13.2%) belonged to the 15-24 age group, 17 (32.1%) to the 25-34 age group, 8 (15.1%) to the 35-44 age group, 14 (26.4%) to the 45-54 age group, and the remaining 7 (13.2%) to the 55-64 age group. Additionally, alcoholic and non-alcoholic sub-groups were evaluated as similar to each other in terms of average age (37.5 ± 11.9 and 35.6 ± 12.7 , respectively).

When gypsies were taken as a single group, alcoholism prevalence was higher among smokers, those who had an income providing job within the last week and men, as it was in the

whole study group.

DISCUSSION

According to our results, alcoholism frequency was 12.4 times higher in men than women, a result in agreement with that of Greenfield, et al. in their population-based study.¹⁷ There is no prevalence study in our country which uses MAST. Using a different method, Işık, et al. found the prevalence in men to be about 2% in the territory of the Adana Park Health Centre.¹⁸ Unfortunately, methodological differences prevent any comparison of these results. In the literature, there is no uniform prevalence data. In this field, different prevalence values are found in different parts of the world. Conigliaro, et al. from Pennsylvania, USA found an alcoholism prevalence of about 7%.¹⁹ However alcoholism frequency varies according to the sample group, whether the person is staying at hospital or not, and the scanning method employed. For instance, the study conducted in Barbados by Mansoor, et al. showed that alcoholism frequency was 31% in men and 5% in women, findings that are

Table 3. Logistic Regression Analysis of Some Potential Risk Factors and Alcoholism

Variables	Odds ratio	95% confidence intervals	<i>p</i>
Age	1.02	0.999 - 1.052	0.051
Gender			
Female	Reference		
Male	12.5	5.6 - 27.8	<.001
Ethnicity			
The others	Reference		
Turkish Gypsies	3.2	1.5 - 7.0	<.05
Earned income in the preceding week			
No	Reference		
Yes	1.9	1.021 - 3.801	<.05
Have smoked for more than 3 months or smoked more than 100 cigarettes during their life			
No	Reference		
Yes	3.719	1.087 - 12.719	<.05

considerably higher than other published results and our own.²⁰ Fuentealba, et al. obtained prevalence values in Spain of 40% in men and 3.3% in women.²¹ In all these studies, alcoholism frequency was higher among the unemployed, smokers and men.

Our results about men and smokers are in agreement with those of other studies in the literature. However, in our study, a higher frequency of alcoholism was observed in the employed, particularly in the self-employed. The probable reason for this is the high prices of alcoholic drinks. Only those with a certain income are able to afford alcoholic drinks in our country. According to our results, the quality of the drink decreased and food consumption decreased as the income level decreased. These findings seem to support the comment presented previously. In our research, alcoholism prevalence among those gypsies living in Edirne was 19%, which was 3.5 times higher than others. There were also some differences in the amount consumed and the type of alcoholic drinks. Although the alcohol types consumed in the other group were mostly *rakı* and beer, the gypsies mostly consumed wine, in greater quantities and on a daily base. This group didn't have a tendency to eat while drinking alcohol. The probable reason for this might be that they didn't have permanent jobs and had lower incomes. Ethnicity is one of the most frequently used variables in the studies of alcoholism frequency. Generally in most countries where research has been conducted, it is observed that alcoholism frequency is higher in the minority ethnic groups. Dawson, et al. claimed that alcoholism frequency is higher among Africans, Hispanics, people living in the countryside and the unemployed.²² The result agrees with our finding that alcoholism frequency in gypsies was higher than in others. Similarly, according to the study conducted by Jones, et al. in the USA, race and ethnicity shape the socioeconomic position and income level which consecutively affect alcohol consumption in ethnic groups.²³ Having examined the studies conducted on the ethnic groups in neighbouring countries close to Edirne, our study produced the same alcoholism frequencies. Balabanova, et al. in Bulgaria and Madianoz, et al. in Greece found an alcoholism frequency of

about 10-15% and stated that these frequencies might vary according to working conditions, sex, income, and geographical location.^{24,25} In all these studies, alcoholism frequency was observed to be higher in men, smokers and the unemployed. Except for the unemployed, these findings resemble our own.

The most important finding of this study was that alcohol consumption decreased in the unemployed. However, this finding is not in agreement with that of studies in other parts of the world. The gypsies under consideration who differ in tradition, way of life, employment, and social status, also differed widely in alcohol consumption. This group usually consumed wine, was not selective in its choice for a place to drink alcohol, and generally did not eat while drinking.

Alcoholism, which seriously threatens public health, should be evaluated by employing simple, easily applicable, cost effective scanning methods. There are few studies on alcoholism prevalence in Turkey. There is a need for similar studies, especially in the Trakya District where alcohol consumption is widespread. The prevalence of alcoholism in the Edirne provincial centre shows the same pattern as that in other European countries. The most important finding in this study was that alcohol consumption decreased in the unemployed. However studies conducted all over the world have revealed a positive correlation between unemployment and alcoholism. The finding about the gypsies living in the Trakya district is another crucial aspect of this study. Alcohol consumption was common among the gypsies.

Alcoholism is accepted as both a crucial health problem in developed countries and a burden on the national budget, and is analysed through nationwide projects. For instance, in the USA, a national database has been formed to evaluate this issue. Drug addiction and alcoholism are very difficult and expensive problems to overcome. Furthermore they are recurrent problems. Therefore prevention should have priority over cure. Youngsters, teachers, families and society should be kept well informed about the issue in order to raise social mobilisation. At the level of secondary prevention, risky groups should be detected at the initial phases. Particularly in Edirne, where one

person out of ten can be defined as alcoholic, much more attention should be drawn to the issue. Alcohol consumption should be regarded as a health problem which also affects cigarette and drug addiction. Struggling against alcoholism might help to decrease these other types of addiction.

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