Research Article

Prevalence of alcohol consumption among adults in urban field practice area NMC, Raichur, Karnataka, India

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ABSTRACT

Background: According to world health report, at least 10 thousand million people throughout the world regularly use alcohol. A WHO report indicates that alcohol use accounts for 3.2% of all global deaths and 4% of all global burden of diseases; it also accounts for 3.5% of all DALYs lost due to all causes. Profile of clients in addiction treatment centers in 23 states showed that alcohol was the first or second major drug of abuse in most of the states of India. Habitual alcohol use is another major lifestyle factor associated with ill health and a large number of serious diseases. Objectives of the study were to estimate the prevalence of alcohol consumption among adults in urban population.

Methods: A cross sectional, community based study was undertaken over a period of one year from January 2013 – December 2013, in urban field Practice area of Navodaya Medical College. Study population was people aged 18-65 years residing in the urban field practice area of NMC. Sampling method was systematic random sampling. Statistical Analysis: Chi Square Test by using SPSS version 17.

Results: Total participants in the study were 1751, comprised of 964 males and 787 females. current alcohol use 33.6% (male- 49.2%, female-14.4%). 32.78% of males and 12.57% females consumed alcohol since 20 years. 18.56% males and 1.90% females consumed for more than 20years. Majority 33.6% belonged to Class I, followed by 37.8% Class III and 36.0% Class IV.

Conclusions: Nearly one third of subjects use alcohol among them nearly half of the men consumed alcohol. Usage of alcohol is more common in middle aged men.

Keywords: Alcohol, CVD's, Life style diseases, NCDs

INTRODUCTION

Important risk factor of “modern epidemic”, that is NCDs is alcohol consumption. It has been proved that, high alcohol intake, defined as 75grms or more per day is an independent risk factor for all CVDs, hypertension cancers, obesity and also excessive intake of alcohol can increase the risk of diabetes by damaging the pancreases and liver and by promoting obesity.¹⁻³ According to world health report, at least 10 thousand million people throughout the world regularly use alcohol.¹ A WHO report indicates that alcohol use accounts for 3.2% of all

global deaths and 4% of all global burden of diseases; it also accounts for 3.5% of all DALYs lost due to all causes. Profile of clients in addiction treatment centers in 23 states showed that alcohol was the first or second major drug of abuse in most of the states of India. Habitual alcohol use is another major lifestyle factor associated with ill health and a large number of serious diseases as depicted in Table 1. Changing social norms, urbanization, increased availability, high intensity mass marketing and relaxation of overseas trade rules along with poor level of awareness related to alcohol has contributed to increased alcohol use in India.

62.5% million alcohol users are estimated in India. Per capita consumption of alcohol increased by 106.7% over the 15-year period from 1970 to 1996. Due to its large population, India has been identified as the potentially

third largest market for alcoholic beverages in the world which has attracted the attention of multinational liquor companies.

Table 1: Alcohol related diseases.

Related diseases
Hypertension & Stroke (RR 1.4 to 4.1, depending on intake)
IHD (mild consumption may be protective (RR=0.68); heavy consumption carries risk (RR=1.33))
Road Accidents
Obesity
Diabetes Mellitus
Cancers: Female Breast Cancer (RR1.14 to 1.62); Oral Cancer (RR 1.45 to 5.39); other cancers (aero digestive tract, stomach, pancreas, kidneys, bladder) (RR 1.8 to 4.93 depending on intake and site)
Liver disease (RR 1.2 to 13 depending on intake)
Pancreatitis
Social and emotional problems
Psychiatric problems and dependence

Sale of alcohol has been growing steadily at 6% and is in the form of hard liquor or distilled spirits showing that the majority drink beverages with a high concentration of alcohol. Branded liquor accounts for about 40% of alcohol consumption while the rest is in the form of country liquor.

People drink at an earlier age than previously. The mean age of initiation of alcohol use has decreased from 23.36 years in 1950 to 1960 to 19.45 years in 1980 to 1990. India has a large proportion of lifetime abstainers (89.6%). This makes India an attractive business proportion for the liquor industry.²

Mechanism for occurrence of CVDs is by altering blood lipid level, increasing the release of catecholamine and it also affects the myocardial metabolism, oxygen consumption and ventricular function. Many studies have shown that there is a positive correlation between alcohol consumption and blood pressure level, and it is independent of body weight and smoking habits.

A major concern about regular alcohol use is, however, its enhancement of overeating, under activity, and smoking along with its intrinsic caloric density. Given these several relationships, public health recommendations for alcohol are not yet indicated in any quantity, as a “protective measure” for heart diseases.⁴ Objective of the study was to estimate the prevalence of alcohol consumption among adults in urban population.

METHODS

It was a community based cross sectional study which was undertaken in the urban field practice area of the Department of Community Medicine, Navodaya Medical

College, Ashapur, Raichur, Karnataka, India. From January 2013 to December 2013. The study population comprised of people aged 18-65 years residing in the urban field practice area.

Inclusion criteria

People aged 18-65 years who are the permanent residents in the urban field practice area of Navodaya medical College.

Exclusion criteria

- Individuals below 18 years and above 65 years
- Individuals who did not give consent

Sample size calculation

Using statistical formula $n = z^2 pq / d^2$

Prevalence of NCD in urban area, $p = 5\%$; $n = 1900$ (150 among these were not responding, so the sample size came to be 1751).

Sampling method

It was a systematic random sampling. House was taken as the sampling unit.

Alcohol

Current consumer

A person who was consuming alcohol at the time of study or has stopped drinking alcohol less than one year

Past consumer

A person who used to consume alcohol before one year and is not consuming alcohol at present

Non-consumer

A person who has never consumed alcohol

Statistical analysis

The data was entered in excel spread sheet after coding. It will be processed and analyzed statistically using the SPSS statistical package (SPSS version 17.0 for windows 2009). Chi Square test was used and P value less than 0.05 will be considered significant.

RESULTS

33.6% of the participants reported of current consuming of alcohol, 49.2% of the males in the study were consuming alcohol and 14.48% females said same. The test was statistically significant.

Table 2: Socio demographic factors.

Category	Number	Percentage
Gender		
Male	964	55.1
Female	787	44.9
Marital status		
Married	1380	78.8
Never Married	184	10.5
Widow	187	10.7
Occupation		
Unemployed	6	0.3
Labourer	160	9.1
Semi-skilled worker	898	51.3
Clerical/Shop owner/farmer	258	14.7
Semi-Profession	249	14.2
Profession	180	10.3
Literacy		
Illiterate	460	26.3
Literate	1291	73.7
Religion		
Hindu	1157	66.1
Muslim	361	20.6
Christian	206	11.8
Socio economic status (Modified B G Prasad)		
Class V	39	2.2
Class IV	503	28.7
Class III	696	39.7
Class II	412	23.5
Class I	101	5.8

34.77% participants reported to consume alcohol, 32.78% of males and 12.57% females consumed alcohol since 20

years. 18.56% males and 1.90% females consumed for more than 20years. The test was found to be statistically significant.

Table 3: Association between alcohol and gender.

Alcohol	Gender		Total (%)
	Male (%)	Female (%)	
No	414 (42.9)	673 (85.51)	1087 (62.07)
Yes	475 (49.2)	114 (14.48)	589 (33.63)
Past	75 (7.78)	0 (0)	75 (4.28)
Total	964 (100)	787 (100)	1751 (100)

$X^2 = 342.589$; $df = 2$; $p < 0.001$.

33.6% of the participants consumed alcohol in the study, among them majority 33.6% belonged to Class I, followed by 37.8% Class III and 36.0% Class IV. The test was statistically significant. Out of 898 semi-skilled workers 297 (33.1%) reported that they consumed alcohol, out of 258 clerical /shop owners/ farmers 81 (31.4%) consumed alcohol. The association between occupation and alcohol consumption was found to be significant.

Table 4: Association between duration of alcohol consumption and gender.

Alcohol consumption	Gender		Total (%)
	Male (%)	Female (%)	
Never	469 (48.65)	673 (85.51)	1142 (65.21)
Since 20 years	316 (32.78)	99 (12.57)	415 (23.7)
>20 years	179 (18.56)	15 (1.90)	194 (11.07)
Total	964 (100)	787 (100)	1751 (100)

$X^2 = 273.45$; $df = 2$; $p = 0.001$.

37.4% participants were presently consuming alcohol, among them 38.5% were 21-30 years age group and 25.8% belonged to 31-40 years age group. 4.28% participants were past alcohol consumers among them 41.3% belonged to >51 years age group. The test was statistically significant.

DISCUSSION

This survey aimed to evaluate alcohol consumption among adults. The risk factors are the diseases of tomorrow. Identifying these risk factors in populations occupies a central role in the surveillance system because of the importance of lag time between exposure and the disease.

Therefore, public health strategies have to be driven by the motive of identifying risk factors in populations, and countries need to know the profile of risk factors of populations in different settings. Prevalence of alcohol consumption is 33.6%, the prevalence is 49.2% among the males and 14.48% among females. Similar Multi

centric study by Shah B et al, reported 40-50% among men.⁵ 32.78% of males and 12.57% females consumed

alcohol since 20 years. 18.56% males and 1.90% females consumed for more than 20 years.

Table 5: Association between alcohol consumption and socio economic status.

		Ever consumed alcohol			Total (%)
		No (%)	Yes (%)	Past (%)	
BG Prasad SES	Class V (%)	39 (100)	0 (0)	0 (0)	39 (100)
	Class IV (%)	278 (55.3)	181 (36.0)	44 (8.7)	503 (100)
	Class III (%)	422 (60.0)	263 (37.8)	11 (1.6)	696 (100)
	Class II (%)	306 (74.3)	86 (20.9)	20 (4.9)	412 (100)
	Class I (%)	42 (41.6)	59 (58.4)	0 (0)	101 (100)
	Total (%)	1087 (62.1)	589 (33.6)	75 (4.3)	1751 (100)

$\chi^2 = 127.2$; df=8; $p < 0.0001$.

Table 6: Association between alcohol consumption and occupation.

		Ever consumed alcohol			Total (%)
		No (%)	Yes (%)	Past (%)	
Occupation	Unemployed (%)	0 (0)	6 (100)	0 (0)	6 (100)
	Labourer (%)	108 (67.5)	52 (32.5)	0 (0)	160 (100)
	Semi-skilled worker (%)	560 (62.4)	297 (33.1)	41 (4.6)	898 (100)
	Clerical/Shop owner/farmer (%)	171 (66.3)	81 (31.4)	6 (2.3)	258 (100)
	Semi-Profession (%)	155 (62.2)	72 (28.9)	22 (8.8)	249 (100)
	Profession (%)	93 (51.7)	81 (45.0)	6 (3.3)	180 (100)
	Total (%)	1087 (62.1)	589 (33.6)	75 (4.3)	1751 (100)

$\chi^2 = 47.329$; df= 10; $p = 0.0001$.

Table 7: Association between alcohol consumption and age category.

	Age category (years)					Total (%)
	<20 (%)	21-30 (%)	31-40 (%)	41-50 (%)	>51 (%)	
No	215 (19.8)	334 (30.7)	251 (23.1)	155 (14.3)	132 (12.1)	1087 (100)
Yes	35 (5.9)	227 (38.5)	152 (25.8)	86 (14.6)	89 (15.1)	589 (100)
Past	0 (0)	24 (32.0)	20 (26.7)	0 (0)	31 (41.3)	75 (100)
Total	250 (14.3)	585 (33.4)	423 (24.2)	241 (13.8)	252 (14.4)	1751 (100)

$\chi^2 = 123.483$; df=8; $p = 0.0001$

Majority 33.6% belonged to Class I, followed by 37.8% Class III and 36.0% Class IV. This finding is in accordance with the study of Singh J et al and Meena et al.^{6,7} 38.5% were 21-30 years age group and 25.8% belonged to 31-40 years age group. 4.28% participants were past alcohol consumers among them 41.3% belonged to >51 years age group.

In this study 68.14% of alcoholics consumed alcohol since 20 years among them 48.0% belonged to 21-30 years age group followed by 32.0% in the age group of 31-40 years. The rest 31.8% out of the total alcoholics consumed for more than 20 years.

As noted above, women had a low prevalence of alcohol intake, suggesting potentially beneficial influences of social mores.

CONCLUSION

The above results draw attention to boom in the alcohol prevalence that is being faced by the population of urban Raichur Karnataka. The take home point here is that our population requires a paradigm shift in its behavioural pattern, which contributes greatly to the prevalence. Nearly one third of subjects use alcohol among them nearly half of the men consumed alcohol. Usage of alcohol is more common in middle aged men.

Recommendations

- Integration of all NCDs related national programme by creating separate division/department for NCDs and renaming the programme as integrated National NCDs Control Programme keeping the scope open for entry of more diseases in future.

- To start a similar institute like NICDs (National Institute of Communicable Diseases) at national level for the non-communicable diseases and which can be named as NINCDs (National Institute of Non Communicable Diseases) with centres at different regions of the country.
- A nationwide initiative to create awareness among the people of the community regarding the harmful effects of alcohol, with main focus on children, adolescents and adults, so as to deter early initiation of alcohol.
- Routine screening for risk factors and NCDs in the health services for all individuals.
- Emphasis on comprehensive approach that encompasses preventive, promotive, curative and rehabilitative aspects in medical and nursing curriculum rather emphasizing only on curative care.

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