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Original Research Article

Assessment of alcohol use and its associated factors among adults residing at Dakshina Kannada district, Karnataka, India

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ABSTRACT

Background: Alcohol consumption was accepted social practice since ancient times. Presently, alcohol consumption is pervasive and has been consistently increasing throughout the world. Alcohol consumption is considered as world's third largest risk factor for the occurrence of disease and disability. The objective of the study was to assess the burden of alcohol use and the factors associated for the alcohol consumption among adults residing at Dakshina Kannada district.
Methods: This community based cross sectional study was conducted among adults aged more than 18 years in Dakshina Kannada district to assess the burden and correlates of alcohol consumption. A total of 355 participants were selected randomly and data was collected by using pretested questionnaire which includes sociodemographic details, alcohol use disorders identification test (AUDIT) questionnaire and associated factors. Data was analyzed by using SPSS software and the statistical significance level was fixed at $p<0.05$.
Results: The prevalence of alcohol use was 30.7%, and it was higher among males (37.1%) compared to females (8.8%). Even the alcohol use was higher among those participants, who were employed, tobacco users and was having any existing disease. As per AUDIT risk level, maximum (49.5%) alcohol users belonged to low risk (zone I) with AUDIT score less than 8.
Conclusions: The burden of alcohol consumption among adults in Dakshina Kannada district is nearly one -third of the population, which is quite high. The highest prevalence was found among males and tobacco users.

Keywords: Alcohol use, AUDIT, Correlates of alcohol use

INTRODUCTION

Alcohol consumption was accepted social practice since ancient times. In India, the attitudes and behaviors about alcohol consumption are very complex and contradictory, because of different influences in the Indian history. The pattern of drinking in India has undergone a change from occasional and ritualistic use to being a social event.[1] Presently, alcohol consumption is pervasive and has been consistently increasing throughout the world. Globally, harmful use of alcohol causes approximately 3 million deaths every year and 5.1% of the global burden of disease is attributable to alcohol consumption.[2,3] According to National Family Health Survey (NFHS) 5 1% females and 19% males aged above 15 years consumed alcohol.[4] Alcohol consumption is considered as world's third largest risk factor for disease and disability.[5] It is also associated with health and social problems, tobacco and illicit drug use and a range of other risky behaviors.[5] It has been already proved that, high alcohol intake (75gms or more of absolute alcohol) per day is an independent risk factor for cardiovascular diseases,

hypertension cancers, obesity and diabetes.[6,7] Despite the harmful consequences of alcoholism, still there is an inadequate recognition of alcohol consumption/misuse as a public health issue in India.[8] Recent study stated that in India, health loss from alcohol will grow even larger, unless effective interventions and policies are implemented to reduce these habits.[9] So, this study was conducted to assess the burden of alcohol use and the factors associated for alcohol use among adults residing at Dakshina Kannada district.

METHODS

Study design and settings

This community based cross-sectional study was conducted among adults aged more than 18 years, residing in rural area of Dakshina Kannada district of Karnataka, India from August 2018 to September 2018.

Sample size calculation

Based on the prevalence of alcoholism as 35.7% in Tamil Nadu by Ruma Dutta et al with relative precision of 15%, alpha error of 0.05, and attrition level of 10%, the sample size was estimated to 355.[10]

Inclusion criteria

All adults aged 18 years and above, who had consumed the alcohol in the last one year, were included in the study

Exclusion criteria

Any adults who were not willing for the study and underwent alcohol de-addiction therapy were excluded from the study.

Sampling method

Simple random sampling method was used.

Data collection

Ethical approval was obtained from the Institutional Ethics Committee before starting this study. After obtaining informed consent from the participants, the data was collected using pre-tested structured questionnaire which includes the sociodemographic details, habits (alcohol & tobacco consumption) and presence of any disease. Modified B G Prasad classification (2022) was used for calculation of socio-economic status of the participants.[11] The pattern of alcohol use was assessed by validated alcohol use disorders identification test (AUDIT) questionnaire, which is alcohol screening instrument developed by WHO The AUDIT questionnaire consists of 10-question, each of the questions has a set of responses to choose from, and each response has a score ranging from 0 to 4.[12] Total score is divided into 4 zones. Zone I refer to low risk drinking or abstinence with AUDIT score 0 to 7. The second level is Zone II, which consists of alcohol use in excess of low-risk guidelines, with AUDIT score 8 to 15. The third level, Zone III, is suggested by AUDIT scores in the range of 16 to 19 and consists of harmful and hazardous drinking. The fourth risk level, i.e., Zone IV is suggested by AUDIT scores more than 20, which consists of alcohol dependence. In general, a total score of 8 or more is considered to indicate hazardous or harmful alcohol use, as well as possible alcohol dependence.[12]

Statistical analysis

The data entry was done in Microsoft Excel sheet and was analyzed by using SPSS software, trial version 21. Tests of significance such as Pearson's chi square-test were used, and the statistical significance level was fixed at $p<0.05$.

RESULTS

A total of 355 participants were enrolled in this study, out of which 264 (74.4%) were males and 91 (25.6%) were females. Out of 355 participants, 109 were consuming alcohol which showed the prevalence of 30.7%.

The prevalence of alcohol consumption was found to be higher among males (37.1%), participants who were employed (37.9%) and among tobacco users (57.9%), which were statistically significant. This study also showed that the alcohol consumption was relatively more among participants, who were in the age group of 26-40 years (38.6%), those who were educated till secondary class (43.8%), who were unmarried (33.3%) and who belongs to upper middle class of socio-economic status (40.3%) (Table 1).

Table 1: Sociodemographic characteristic of study participants in respect to alcohol consumption (n=355).

Variables	Alcohol consumption		Total	P value
	Yes (%)	No (%)		
Age (in years)				
18-25	8 (13.8)	50 (86.2)	58	0.914
26-40	39 (38.6)	62 (61.4)	101	
41-60	44 (34.6)	83 (65.4)	127	
>60	18 (26.1)	51 (73.9)	69	
Gender				
Male	98 (37.1)	166 (62.9)	264	

Continued.

Variables	Alcohol consumption		Total	P value
Female	8 (8.8)	83 (91.2)	91	<0.00001*
Education				
Illiterate	12 (31.6)	26 (68.4)	38	0.585
Primary (1st - 8th standard)	29 (19.7)	118 (80.3)	147	
Secondary (9th - 12th standard)	39 (43.8)	50 (56.2)	89	
Graduate & above	23 (28.4)	58 (71.6)	81	
Marital status				
Married	84 (30.8)	189 (69.2)	273	0.228
Unmarried	23 (33.3)	46 (66.7)	69	
Widowed/ separated	2 (15.4)	11 (84.6)	13	
Occupation				
Employed	97 (37.9)	159 (62.1)	256	<0.00001*
Unemployed	6 (6.1)	93 (93.9)	99	
Socioeconomic status				
Upper class	29 (32.1)	47 (67.9)	76	0.083
Upper middle class	27 (40.3)	40 (59.7)	67	
Middle class	21 (22.8)	71 (77.2)	92	
Lower middle class	23 (34.8)	43 (65.2)	66	
Lower class	12 (22.2)	42 (77.8)	54	
Tobacco consumption (smoke or smokeless)				
Yes	73 (57.9)	53 (42.1)	126	<0.00001*
No	31 (13.5)	198 (86.5)	229	
Existing chronic disease				
Yes	21 (31.3)	46 (68.7)	67	0.092
No	79 (27.4)	209 (72.6)	288	

*Statistically significant.

Table 2: Distribution of alcohol consumption participants according to AUDIT risk level (n=109)

AUDIT risk level	AUDIT Score	No (%)
Zone I (Low risk drinking)	0-7	54 (49.5)
Zone II (alcohol use in excess of low risk)	8-15	27 (24.8)
Zone III (Harmful & hazardous drinking)	16-19	21 (19.3)
Zone IV (Alcohol dependence)	20-40	7 (6.4)

Table 3: Correlates of alcohol consumption by Logistic regression (n=355).

Variables	Total	Non-alcoholic	Alcoholic	Odd's ratio (95% CI)	P value
Age (in years)					
<40	159	108	51	1.1236 (0.7145-1.7669)	0.6140
>40	196	138	58	1	
Gender					
Male	264	166	98	4.2935 (2.1797-8.4575)	<0.0001**
Female	91	80	11	1	
Education					
Illiterate	38	15	23	4.1186 (2.0534-8.2608)	0.0001**
Literate	317	231	86	1	
Marital status					
Married	273	178	95	2.5923 (1.3850-4.8519)	0.0029**
Unmarried/widowed /separated	82	68	14	1	
Occupation					
Employed	256	160	96	3.9692 (2.1018-7.4958)	<0.0001**
Unemployed	99	86	13	1	
Tobacco consumption					
Yes	126	41	85	17.7083 (10.0783- 31.1148)	<0.0001**
No	229	205	24	1	

*Statistically significant

It was observed that among 109 alcohol users, maximum participants (49.5%) belonged to Zone I (low risk drinking) and least (6.4%) belonged to Zone IV on AUDIT risk level score (Table 2). A multiple logistic regression showed that, the alcohol consumption is 4.29 times more in males, 4.11 times among illiterate, 1.79 times more in married participants, 3.96 times more in employed participants and 17.70 times more among tobacco users (Table 3).

DISCUSSION

The prevalence of alcohol consumption among adults was 30.7% (male – 35.5% and female – 8.7%), which was similar to NFHS – 5 (2019-21) report.[4] Dutta et al showed that the prevalence of alcohol consumption was 35.7%, which was slightly higher than our study finding.[10] The prevalence was much higher in males compared to females. Similar finding was observed by Krishnan et al in rural area of Faridabad and Kumar et al in rural Tamil Nadu.[13,14] The increased risk of alcohol consumption was observed among the participants who were in age group of 21-40 years and illiterate. This finding was similar to the study done by Kumar et al.[14] Maximum participants (48.8%) were belonged to AUDIT zone I with a score less than 8. Pal et al in his study showed that 48.5% of alcohol users had AUDIT score less than 8, which was similar to this study result.[15] The prevalence of hazardous drinking was 19.3% (Zone III: AUDIT score 16-19), which was comparable with the study done by John A et al in Southern India and Silva et al in Goa.[16,17] The risk of alcohol consumption was found to be significantly associated in males, employed participants and tobacco users. In a study done by Kumar et al, the alcohol consumption was 11.23 and 17.78 times more in males and tobacco smokers respectively.[14] In contrast, this study showed the prevalence of alcohol consumption was 4.29 times more in males and 17.70 times among tobacco users. This study showed that employed participants had 3.96 times more prone for alcohol consumption. In a study done by Rathod et al and Sujiv et al, revealed that those who were employed, more prone to become high risk level drinker.[18,19] This community based cross sectional study provides good & valuable information on alcohol consumption /use in the Dakshina Kannada population with the use of WHO standard instrument (AUDIT). It is one of the best screening tools which is Internationally accepted and used for alcohol consumption as well as for related risks in primary and community settings.

The limitation of this study was information related to initiation of alcohol consumption was not done.

CONCLUSION

Alcohol use is an important public health problem not only in urban area, but also in rural areas. This study showed that nearly one -third of the Dakshina Kannada population are consuming alcohol, with the highest prevalence among males. The middle age group people are more likely to consume alcohol compare to other age group. So, there is a need of health educational awareness and intervention among the general population, which may help in bringing down the burden of alcohol use.

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REFERENCES

1. Sharma HK, Tripathi BM, Pelto PJ. The Evolution of alcohol use in India: AIDS Behav. 2010;14 Suppl 1:S8-17.
2. Girish N, Kavita R, Gururaj G, Benegal V. Alcohol use and implications for public health: Patterns of use in four communities. Indian J Community Med. 2010;35:238 44.
3. World Health Organization's Global Status Report on Alcohol and Health; 2018. Available at: https://www.who.int/publications/i/item/9789241565639. Accessed on 15 February 2023.
4. International Institute of Population Sciences and ORC Macro. National Family Health Survey - 5, 2019-21. International Institute of Population Sciences, Mumbai. Available at: http://rchiips.org/nfhs/NFHS-5Reports/NFHS-5_India_Report.pdf. Accessed on 15 February 2023.
5. Jessor R, Jessor SL. Problem Behavior and Psychosocial Development: A Longitudinal Study of Youth. New York: Academic Press; 1977.
6. Agarwal S, Basannar DR, Bhalwar R, Bhatnagar A, Bhatti VK, Chatterjee K, et al Textbook of Public Health and Community Medicine. Pune: AFMC in collaboration with WHO, India. 2009;1041-101.
7. Park. K, Text Book of Preventive and Social Medicine. 23rd edition. Jablapur: Banarsidas Banot; 2015: 365-400.
8. Neufeld KJ, Peters DH, Rani M, Bonu S, Brooner RK. Regular use of alcohol and tobacco in India and its association with age, gender, and poverty. Drug and Alcohol Dependence. 2005;77(3):283-91.
9. Ramadas K, Sauvaget C, Thomas G, Fayette JM, Thara S, Sankaranarayanan R. Effect of tobacco chewing, tobacco smoking and alcohol on all-cause and cancer mortality: a cohort study from Trivandrum, India. Cancer Epidemiol. 2010;34:405-12.
10. Dutta R, Gnanasekaran S, Suchithra S, Srilalitha V, Sujitha R, Sivaranjani SS, et al. A population based study on Alcoholism among Adult Males in a Rural Area, Tamil Nadu, India. J Clin Diagn Res. 2014;8:JC01-3.
11. Sharma N, Singh M, Bahurupi Y, Aggarwal P. Revised BG prasad socioeconomic status scale for the year 2022: Updation based on latest base year series 2016. J Med Evid. 2022;3:303-4.

12. Saunders JB, Aasland OG, Babor TF, Juan R, Fuente DL, Grant M. Development of the alcohol use disorders identification test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption - II. Addiction; 1993;88(6):791-804.
13. Krishnan A, Shah B, Lal V, Shukla DK, Paul E, Kapoor SK. Prevalence of risk factors for non-communicable disease in a rural area of Faridabad district of Haryana. Indian J Public Health. 2008;52:117-24.
14. Ganesh Kumar S, Premarajan K.C, Subitha L. Suguna E, Vinayagamoorthy, Veera Kumar. Prevalence and Pattern of Alcohol Consumption using Alcohol Use Disorders Identification Test (AUDIT) in Rural Tamil Nadu, India. J Clin Diagn Res 2013;7(8):1637-39.
15. Pal HR, Yadav S, Joy PS, Mehta S, Ray R. Treatment nonseeking in alcohol users: a community-based study from North India. J Stud Alcohol. 2003;64:631-3.
16. John A, Barman A, Bal D, Chandy G, Samuel J, Thokchom M et al. Hazardous alcohol use in rural southern India: nature, prevalence and risk factors. Natl Med J India. 2009;22:123-5.
17. Chagas Silva M, Gaunekar G, Patel V, Kukalekar DS, Fernandes J. The prevalence and correlates of hazardous drinking in industrial workers: a study from Goa, India. Alcohol Alcohol. 2003;38:79-83.
18. Rathod SD, Nadkarni A, Bhana A, Shidhaye R. Epidemiological features of alcohol use in rural India: a population-based cross-sectional study. BMJ Open. 2015;5(12):e009802.
19. Sujiv A, Chinnakali P, Balajee K, Lakshminarayanan S, Kumar SG, Roy G. Alcohol use and alcohol use disorder among male outpatients in a primary care setting in rural Puducherry. Industrial Psychiatry J. 2015;24(2):135.

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