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ORIGINAL RESEARCH

A cross sectional study using the Alcohol, Smoking, and Substance Involvement Screening (ASSIST) questionnaire &Scores among local workers

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ABSTRACT

Introduction: Large epidemiological surveys have shown alcohol, tobacco (i.e., cigarettes), and marijuana has the highest prevalence rates across all age groups. Alcohol is a serious public health problem.There is a lacuna of evidence on screening for harmful alcohol use linked to ASSIST in Indian workplace settings. This prompted the us to explore this area to generate an evidence base while planning for workplace alcohol interventions**.**

Methods: The present Observational , Analytical & Cross Sectional study is carried out on 200 subjects . The criteria for detection as moderate and high-risk alcohol use were based on the ASSIST score of 11–26 (moderate risk) and 27 and above (high-risk).

Results: Nearly one-fourth of the 200 screened participants were moderate and high-risk users of alcohol. Among them, a major proportion were in high-risk level category.Major proportion of subjects in the high-risk use category were young, whereas more than half of the subjects in the moderate risk use category were in the age group of 36–50 . The difference in this distribution was significant.

Conclusions: The results of the study indicate the alarming magnitude of harmful alcohol use in workplace settings and advocate that ASSIST is an important screening tool for detecting harmful substance use in this population. It corroborates the findings of previous studies – a reveille on harmful use of alcohol to forecast for early intervention strategies for alcohol problems**.**

Keywords:ASSIST – WHO, Alcohol , Tobacco , Substance Abuse , Workplace

INTRODUCTION

The consumption of drugs and addiction are common problems throughout the world and a foreseeable cause of death.Substance use is a major public health concern that affects every level of society. Individuals, families, communities, and overall government spending are impacted by the use of licit and illicit substances. A 2015 study found that around 4.9% of the world's adult population is believed to suffer from an alcohol use disorder [1]. Large

epidemiological surveys have shown alcohol, tobacco (i.e., cigarettes), and marijuana has the highest prevalence rates across all age groups [2]. Alcohol is a serious public health problem. Globally, harmful use of alcohol results in the death of 2.5 million people annually. Alcohol contributes nearly to 4% of deaths to 6.2% of all male deaths related to alcohol compared to 1.1% death of females worldwide. Annually, 320,000 young people aged 15–29 years die from alcohol related causes resulting in 9% of all deaths in that age group globally. Alcohol consumption and tobacco use are among the important risk factors for Non Communicable Diseases identified by the World Health Organization [1-3] World Health Organization (WHO) developed the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) as the first screening test for rapidly detecting the harmful use of all psychoactive substances including alcohol, tobacco, and illicit drugs in response to the overwhelming public health burden associated with psychoactive substance use worldwide. The ASSIST is an interviewer-administered pencil and paper questionnaire and is specially designed for use by healthcare workers in a range of health care settings.[1-3]The harmful use of alcohol is one of the world's leading health risks. It is a causal factor in more than 60 types of disease and injuries. The harmful use of alcohol is especially fatal for younger age groups and alcohol is the world's leading risk factor for death among males age 15–59. Approximately 4.5% of the global burden of diseases and injury are attributable to alcohol. Alcohol consumption is estimated to cause 20 to 50% of cirrhosis of the liver, epilepsy, accidents, violence and cancer [1-4]. Recent trends indicate that the use of substances has dramatically increased, particularly in developing countries [2-7]India had a low prevalence of alcohol use disorders compared to the global scenario, but recent reports show an alarming increase in alcohol consumption.[2-11] Furthermore, evidence suggests that workplace alcohol screening has the potential in reducing the harmful drinking pattern and plays a major role in preventing its progression into serious diseases.[12,13] However, epidemiological research on substance use screening linked to ASSIST in Indian populations is limited.[14]. There is a lacuna of evidence on screening for harmful alcohol use linked to ASSIST in Indian workplace settings. This prompted the us to explore this area to generate an evidence base while planning for workplace alcohol interventions.

METHODOLOGY

The presentObservational , Analytical &Cross Sectional study is carried out on 200 subjects .The study included Interview records of200Randomly selected adult workers from local workplace settings in one year.The study was conducted within ethical standards. The study randomly screened 200 semi-skilled male manual workers / laborers i.e., Class 4 employees between the age group of 18–50 years in order to identify subjects with moderate risk and high-risk on WHO ASSIST V3.0 questionnaire scores. The criteria for detection as moderate and high-risk alcohol use were based on the ASSIST score of 11–26 (moderaterisk) and 27 and above (high-risk). Clients scoringbetween 11 and 26 are at moderate risk of health and otherproblems due to alcohol use and may be experiencing some of the problems at the same time. A score of "27 or higher" for any substance suggests that the client is at high risk of dependence or is dependent on that substance and is probably experiencing health, social, financial, legal, and relationship problems as a result of their substance use. Approval was obtained from the authorities, and informed consent was obtained from the subjects.Systematic random sampling method for sample selection was employed.

The analysis was done using the (Version 20.0; SPSS Inc, Chicago, IL, USA). Frequencies with percentages were calculated for categorical variables and mean, and standard deviation were calculated for continuous variables. Chi-square test was used for inferential statistics.

STATISTICAL ANALYSIS

The data obtained were analyzed in detail using the statistical software SPSS 21 for Windows. Data are reported as mean ± SD or proportions and 95% confidence intervals. Statistical analysis was performed by tests of significance.
Analysis was done by Chi-square test. The difference was considered as statistically significant for a p- value of less than 0.05.

STUDY TOOL

Data were collected using pre tested ASSIST (Alcohol, Smoking and Substance Involvement Screening Test), Oslo social support questionnaire and tobacco and alcohol use questionnaire. ASSIST is a brief screening questionnaire to find out about people's use of psycho active substances. It was developed by the World Health Organization (WHO) and an international team of substance use researchers as a simple method of screening for hazardous, harmful, and dependent use of alcohol, tobacco and other psycho active substances [17-19]. The tools are WHO standard tool [17-20]. The data collectors were Diploma graduate nurses who collect the data by using interviewer administered questionnaire. The data collectors explain each question to the participant to help them understand the questions well and answer fill their own response. Three supervisors who is BSC degree graduate and familiar with the specific community were employed for smooth running of data collection process before and during data collection period. The principal investigators have followed and controlled overall data collection process, trained data collectors and supervisors, and performed pretest. The data was collected using interviewer-administered structured questionnaire which was prepared in English and then translated to local language (Hindi , Chhattisgarhi) which most communities could understand.
Informed written consent was taken from all the participants for voluntary participation in the local language (Hindi & Chhattisgarhi).

RESULT

Nearly one-fourth of the 200 screened participants (26.5%, n = 53) were moderate and high-risk users of alcohol. Among them, a major proportion were in high -risk level category (17%, n = 34) and 9.5% (n = 19) were moderate alcohol risk users on ASSIST scores. Almost all of the remaining subjects were "low risk" or non-problematic drinkers and expressed that they use alcohol occasionally and does not have any problems with the same.
Table 1 shows that a major proportion of subjects in the high-risk use category were young, that is, in the age group of 20–35 (76.7%, n = 23), whereas more than half of the subjects in the moderate risk use category were in the age group of 36–50 (52.1%, n = 12). The difference in this distribution was significant (Chi-squared value: 6.11; P = 0.031).
Around one-fifth of the total participants (20.5%, n = 41) used tobacco in moderate and high-risk level along with alcohol on ASSIST scores. More than half of the subjects of the comorbid users of alcohol and tobacco were alcohol high-risk users or heavy drinkers (n=22 , 53.6%),whereas a major portion were tobacco moderate risk users (73.1%, n = 30). This reveals that excessive alcohol consumption can be seen with the concurrent use of both alcohol and tobacco. Although a small proportion of subjects (5%) used alcohol, tobacco, and cannabis in a comorbid manner, all the subjects among these were the high-risk users of cannabis on ASSIST scores. Many subjects verbalized that they hadused other substances such as sedatives, opioids or opioids derivatives eg. Tramadol etc in a lifetime, however, alcohol was the major substance used in a harmful manner by class 4 employees.

Table 1: Moderate and high risk alcohol use as perage groups

ASSISTAlcoholriskscoreAgeinyears *n* (%) X^2

	18-35	36-50	Df *P* value

Alcoholmoderateriskuse	7 (23.3)	12 (52.1)	$7.31=X^2$
Alcoholhighriskuse	23 (76.7)	11 (47.9)	1=Df
			P =0.0273

DISCUSSION

This study used ASSIST to identify harmful drinking in a randomly drawn sample of male Class 4 workers in the workplace settings of local population and found that nearly one-fourth of the total participants were moderate and high-risk users of alcohol as per ASSIST scores. Many screening instruments, such as the Addiction Severity Index, and expanded Substance Abuse Module of the Composite International Diagnostic Interview although comprehensive, are time-consuming to administer in primary care settings. On the other hand, some of the briefer instruments available, such as the CAGE adapted to include drugs, have a focus on dependence, which is less useful for detecting harmful or hazardous use in nondependent persons.[16] Most of the previous studies conducted in working populations on the rates of harmful drinking used the WHO developed instrument – Alcohol Use Disorders Identification Test.[17-19] However, there is little epidemiological research on ASSIST linked screening in Indian populations, and the present study found that ASSIST was very useful as a screening tool in this workplace setting. However, the study also identified an over or under estimation while calculating ASSIST risks score (both score 11 and 26 are considered as moderate drinkers). The results of the study further corroborate the findings of earlier studies with a vivid emphasis on the increasing magnitude of the harmful users of alcohol in the workplace population.[20,21]

One-fifth of the total participants of the study were comorbid users of alcohol and tobacco and more than half of them used alcohol in a high-risk manner . An increase in the harmful drinking pattern of the comorbid users of alcohol and tobacco in the present study provides a tangible support for the association of smoking and drinking in the general population.[22-24]

The current study shows that high-risk drinkers were more in the age group of 20–35 years than above 35 years. This may be interpreted as harmful drinking can be more in young adults (20–35 years) than middle adults (36–50 years). The result of the study is consistent with the similar studies in the Indian population.[25]

Limitations of the current study are its small sample size, cross-sectional design, and reliance on self-reported alcohol consumption. Despite these limitations, the present study opens an area that deserves further research in India with larger samples focusing on the prevalence as well as specific interventions for harmful use of alcohol.

CONCLUSION

The results of the study indicate the alarming magnitudeof harmful alcohol use in workplace settings and advocatethat ASSIST is an important screening tool for detecting harmful substance use in this population. Furthermore, it corroborates the findings of previous studies – a reveille on harmful use of alcohol to forecast for early intervention strategies for alcohol problems.

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CONFLICT OF INTEREST
None declared

CONSENT
Yes

REFERENCES
1. Humeniuk R, Ali R, Babor TF, Farrell M, Formigoni ML, Jittiwutikarn J, et al. Validation of the alcohol, smoking and substance involvement screening test (ASSIST). Addiction 2008;103:1039-47.
2. World Health Organization. WHO International Media Centre: Alcohol Fact Sheet; 2011. Available from: http://www.who.int/ mediacentre/factsheets/fs349/en/index.html. [Last accessed on 2015 Jun 03].
3. Kumar SG, Premarajan KC, Subitha L, Suguna E, Vinayagamoorthy VK. Prevalence and pattern of alcohol consumption using alcohol use disorders identification test (AUDIT) in rural Tamil Nadu, India. J ClinDiagn Res 2013;7:1637-9.
4. Kumar V, Nehra KD, Kumar P, Rathee S, Gupta R. Prevalence and pattern of substance abuse: A study from de addiction centre. Delhi Psychiatry J 2013;16:110-4.
5. Ghosh S, Samanta A, Mukherjee S. Patterns of alcohol consumption among male adults at a slum in Kolkata, India. J Health PopulNutr 2012;30:73-81.
6. 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.
7. 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.
8. Gururaj G, Girish N, Benegal V, Chandra V, Pandav R. Public Health Problems Caused by Harmful Use of Alcohol – Gaining Less or Losing More? Alcohol Control Series 2, World Health Organisation. New Delhi: Regional Office for South East Asia; 2006.
9. Benegal V, Nayak M, Murthy P, Chandra P, Gururaj G. Women and alcohol in India. In: Obot IS, Room R, editors. Alcohol, Gender and Drinking Problems: Perspectives from Low andMiddle Income Countries. 1st ed. Geneva: World HealthOrganisation; 2005. p. 89-124.
10. Prasad R. Alcohol use on the rise in India. Lancet 2009;373:17-8.
11. Ray R. National Survey on Extent, Pattern and Trends of Drug Abuse in India. Ministry of Social Justice and Empowerment. New Delhi: Government of India and United Nations Office on Drugs and Crime; 2004.
12. Hermansson U, Helander A, Brandt L, Huss A, Rönnberg S. Screening and brief intervention for risky alcohol consumption in the workplace: Results of a 1-year randomized controlled study. Alcohol Alcohol 2010;45:252-7.
13. Webb G, Shakeshaft A, Sanson-Fisher R, Havard A. A systematic review of work-place interventions for alcohol-related problems. Addiction 2009;104:365-77.
14. Humeniuk R, Ali R, Babor T, Souza-Formigoni ML, de Lacerda RB, Ling W, et al. A randomized controlled trial of a brief intervention for illicit drugs linked to the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) in clients recruited from primary health-care settings in four countries. Addiction 2012;107:957-66.
15. Joseph J, Das K, Sharma S, Basu D. ASSIST linked alcohol screening and brief intervention in workplace: A feasibility study from a tertiary hospital of North India. Indian J Soc Psychiatry 2013;29:75-8.
16. McPherson TL, Hersch RK. Brief substance use screening instruments for primary care settings: A review. J Subst Abuse Treat 2000;18:193-202.

17. Davey JD, Obst PL, Sheehan MC. The use of AUDIT as a screening tool for alcohol use in the police work-place. Drug Alcohol Rev 2000;19:49-54.
18. Hermansson U, Helander A, Huss A, Brandt L, Rönnberg S. The alcohol use disorders identification test (AUDIT) and carbohydrate-deficient transferrin (CDT) in a routine workplace health examination. Alcohol Clin Exp Res 2000;24:180-7.
19. Saunders JB, Aasland OG, Babor TF, de la Fuente JR, 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;88:791-804.
20. 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.
21. Gaunekar G, Patel V, Rane A. The impact and patterns of hazardous drinking amongst male industrial workers in Goa, India. Soc Psychiatry PsychiatrEpidemiol 2005;40:267-75.
22. Mohan D, Chopra A, Sethi H. The co-occurrence of tobacco & alcohol in general population of metropolis Delhi. Indian J Med Res 2002;116:150-4.
23. Istvan J, Matarazzo JD. Tobacco, alcohol, and caffeine use: A review of their interrelationships. Psychol Bull 1984;95:301-26.
24. Henningfield JE, Clayton R, Pollin W. Involvement of tobacco in alcoholism and illicit drug use. Br J Addict 1990;85:279-91.
25. Benegal V. India: Alcohol and public health. Addiction 2005;100:1051-6.