

THE PREVALENCE OF ALCOHOL USE PROBLEMS AMONG AUTORICKSHAW DRIVERS IN RURAL KERALA- FINDINGS FROM A COMMUNITY-BASED PILOT STUDY

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ABSTRACT

BACKGROUND

Alcohol Use Disorders (AUD) form a major public health concern especially in a developing country like India. Alcohol is implicated in a wide variety of diseases, disorders and injuries and a multitude of social and legal problems. Drivers are considered as a high-risk population for Substance Use Disorders (SUD) and the adverse outcomes of drunken driving may be lethal.

The aim of the study to assess the prevalence of alcohol use problems among autorickshaw drivers in a rural community of North Kerala. The secondary objective was to assess the sociodemographic profile of participants and its relationship to alcohol use problems.

MATERIALS AND METHODS

The study assessed the details of participants (n=83) who were autorickshaw drivers waiting for a trip in 5 auto stands within 5 km radius of Pariyaram Medical College, Kannur district of North Kerala, which were selected randomly through a lot method. The Alcohol Use Disorders Identification Test (AUDIT) self-report version-Malayalam translation and sociodemographic data sheet were used to assess the participants. The data were analysed using descriptive statistical tools such as mean, standard deviation, frequency and percentages were and inferential statistical tools like Chi-square test was used. A p value <0.05 was considered to be statistically significant.

Study Settings- The autorickshaw stands in a rural area of Kannur within 5 km radius of Pariyaram Medical College, which belongs to Kadannappalli-Panapuzha Panchayath where drivers wait for a trip.

Study Design- Community survey.

RESULTS

Among the participants, 77% reported of lifetime use of alcohol and 65% had used alcohol within last one year. 18% of participants had total AUDIT scores more than or equal to 8 indicative of hazardous and harmful alcohol use. Those who were divorced/separated from their spouse, those having Below Poverty Line (BPL) ration card had significantly high level of alcohol use problems. Among the participants, 84% had heard about alcohol de-addiction treatment.

CONCLUSION

The study concludes that alcohol use problems exist among the study population. Though majority were aware about alcohol de-addiction treatment, most were reluctant to undergo the same, the main reason being fear about adverse effects of drugs.

KEYWORDS

Alcohol Use Problems, Prevalence, Autorickshaw Drivers.

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BACKGROUND

Alcohol Use Disorders (AUD) and the related health problems has always been a major area of interest among health professionals. The World Health Organization (WHO) estimates indicate that there are about two billion consumers of alcoholic drinks and 76.3 million people with a diagnosable AUD worldwide.¹ The National Household Survey of Drug Use conducted in India found that alcohol was the primary substance used (21.4%).² The data available from different states in India indicate that 35% to 65% of all current drinkers meet the criteria for hazardous alcohol use.³

When compared to people with alcohol dependence, most alcohol related harm is attributed to those with hazardous or harmful use.^{4,5,6} The study done on alcohol as a risk factor for global burden of disease in the year 2000, found a considerable disease burden of 3.2% of the global deaths and 4.0% of the global DALYs.⁷ Besides causing chronic health issues like malignancy of mouth, oesophagus and multiple internal organs, alcohol harmful use has an array of family and domestic problems and interpersonal violence.⁸

India is visualising an increasing trend as far as injuries are concerned, especially due to road traffic accidents at an annual rate of 3%, which is alarming.⁹ Drivers are considered a high-risk population and the after effects of drunken driving are lethal. A French collaborative study on comparison of the prevalence of alcohol, cannabis and other drugs between 900 injured drivers and 900 control subjects (Mura, Kintz et al 2003) found that a blood alcohol concentration exceeding 0.5 g/L was found in 26% of drivers and 9% of controls.¹⁰

The study which examined the interactive impairing effects of alcohol intoxication and driver distraction on simulated driving performance in 40 young adult drivers using a divided attention task as a distracter activity under alcohol found out that divided attention exacerbated the impairing effects of alcohol on driving precision.¹¹

The commonly used screening instruments for alcohol use disorders are the Michigan Alcohol Screening Test (MAST), the CAGE questionnaire, the 10-item Alcohol Use Disorders Identification Test (AUDIT) and AUDIT-C. The community level studies will be useful for understanding the problem of alcohol use and for taking specific interventional measures.

Autorickshaw is the main mode of transportation in semiurban and rural areas of India. Kannur is a district in north Kerala where majority of population hail from rural area where main mode of local transportation is autorickshaw. In our hospital settings, the number of drivers attending for de-addiction services were found to be more and there was easy accessibility, because of which above said population was selected. The current study has assessed the prevalence of alcohol use problems among autorickshaw drivers in a rural community of North Kerala, the sociodemographic profile of participants and its relationship to alcohol use problems.

MATERIALS AND METHODS

Study Setting- The autorickshaw stands in a rural area of Kannur within 5 km radius of Pariyaram Medical College,

which belongs to Kadannappalli-Panapuzha Panchayath, where drivers wait for a trip.

Study Design- Community survey.

Study Population- All auto drivers waiting for a trip in auto stands of a rural area of Kannur.

Inclusion Criteria

All auto drivers waiting for a trip in 5 auto stands, which were randomly selected using a lot method within 5 km radius of the medical college.

Exclusion Criteria

Refusal to participate in the study. Ethical consideration- The study was approved by Institutional Ethics Committee of Pariyaram Medical College, Kannur. Sampling- Convenient sampling- All consecutive auto drivers waiting in for a trip in 5 auto stands. Study tools- Sociodemographic data sheet, which was used for collecting data and recording information regarding age, marital status, income, other addictions and knowledge about de-addiction services.

Alcohol Use Disorders Identification Test (AUDIT)

Self-report version, Malayalam translation. The scale was translated to Malayalam by Bangalore institute of translation studies and retranslated back to English. The AUDIT was developed by World Health Organization (WHO) as a simple method of screening for excessive drinking and brief intervention. As a score of measure, 1 peg of alcoholic beverage was taken as 1 standard drink. Total AUDIT score will reflect the patients risk related to alcohol. Screening programmes and harmful drinkers if a cutoff score of 8 was used.¹² The AUDIT has shown a high degree of internal consistency over a wide range of samples.¹² Shields and Caruso in 2003 calculated a median reliability of 0.81.¹³ The scale has been translated to multiple non-English languages including Indian languages like Bangla, Konkani and Hindi. Those with scores 8 to 15 represented medium level of alcohol use problems and scores above 16 represented those with high level of alcohol use problems. For ease of administration, sociodemographic data sheet prepared in Malayalam was combined with AUDIT-Malayalam version. Statistical Analysis- Descriptive statistical tools such as mean, standard deviation, frequency and percentages were used. Inferential statistical tools like Chi-square test was used. A p value <0.05 was considered to be statistically significant.

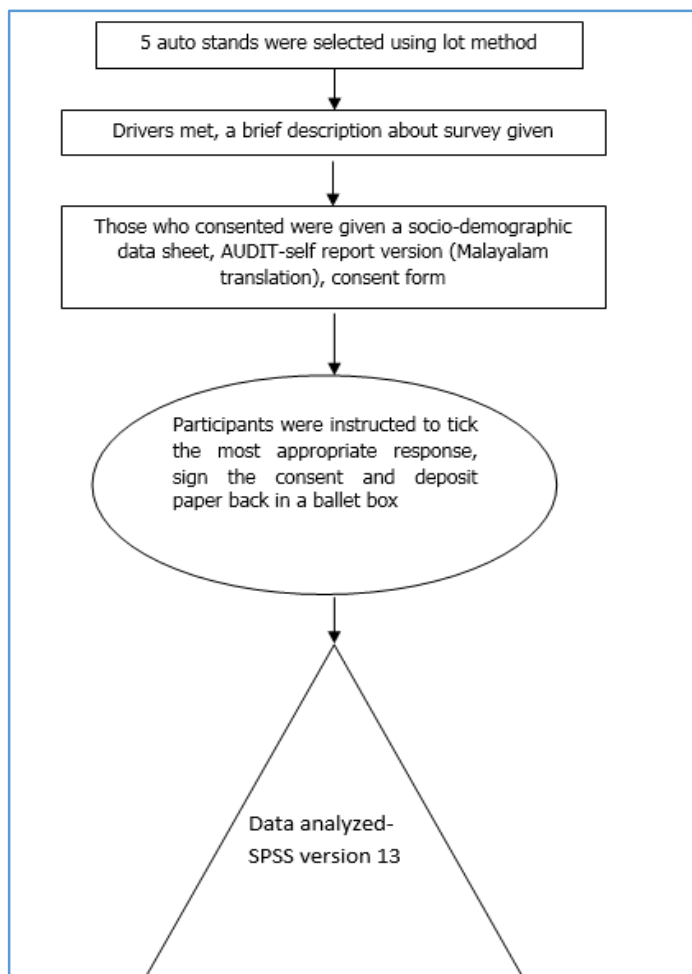


Figure 1. Flow Chart for Data Collection Method

RESULTS

All the participants were males with a mean age of 40.71 years with a standard deviation of 8.9. (77%) of the participants were Hindus and minority were Muslims (4%). Most of the participants were married men (84.3%) of which (87%) were living with wife and among the married participants, (88%) had children. Majority of the participants had education up to 10th std. or less (74.69%) and (67.4%) had a daily income of less than 500 rupees and had ration cards Above Poverty Line- APL (72%).

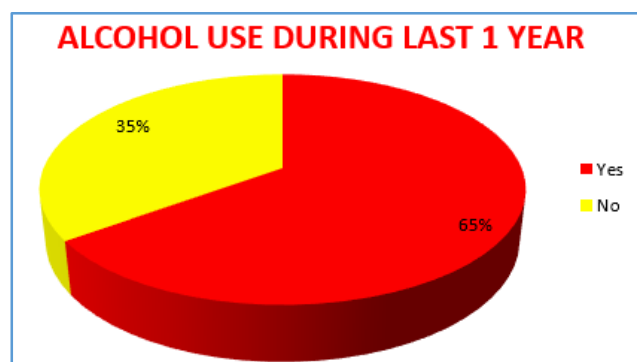


Figure 3. Alcohol Use during Last 1 Year

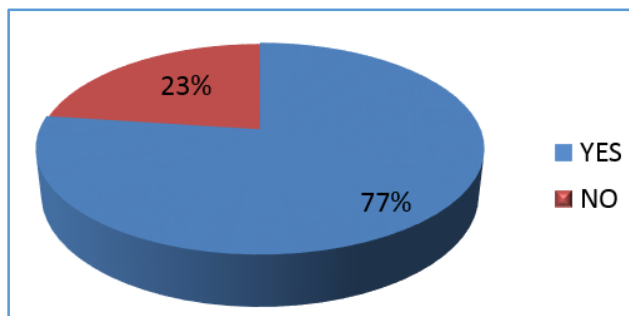


Figure 2. Lifetime Use of Alcohol was Reported by 77% of Participants

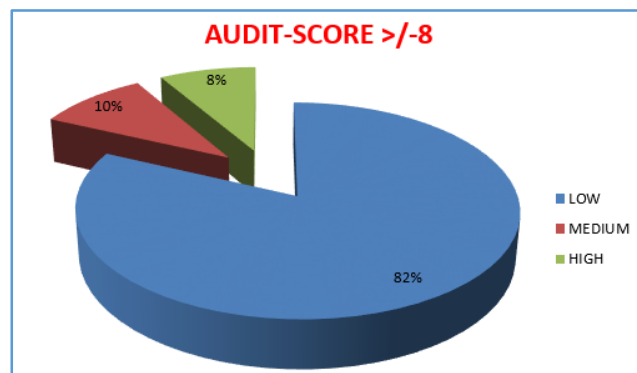


Figure 4. 18% of Participants had Audit Scores More Than or Equal to 8

The study compared the relationship of sociodemographic profile of the participants to alcohol use problems (based on AUDIT scores). Among the participants those who were divorced/separated from their spouse had more problem use of alcohol, which was statistically significant with a p value of (0.026).

When the relationship between the socioeconomic profile and alcohol use problems were compared, it was found that daily income and alcohol use problem were not related, but the money spend on alcohol daily and the higher AUDIT scores were significantly related with a p-value of (<0.01). Below Poverty Line (BPL) is an economic benchmark used by Government of India to indicate economic disadvantage.¹⁴ The participants who had BPL ration cards had significantly higher alcohol use problems (p value=0.03) showing that low socioeconomic status has positive correlation to mean AUDIT scores. Other factors like education and religion were not significantly related to the severity of alcohol use problems.

Among the participants, 84% were aware about alcohol de-addiction treatment, but majority (83%) reported that they were not interested in taking the same. The main reasons stated were fear of adverse effects of drugs and treatment expense. An enquiry into substance use other than alcohol revealed that 78% had nicotine use. Those who reported nil alcohol use had nicotine use.

DISCUSSION

When we compared the results obtained from our study to previous community-based Indian studies, we could find that a mean age of 40.71 years with a standard deviation of 8.9 was comparable to mean age of participants in Kolkata study done by Santanu Ghosh et al (2012) in which the mean age of alcohol consumers was 31 years with a standard deviation of 10.8.¹⁵ Chilcoat and Breslau in 1996 stated that higher rates of heavy and problem drinking are consistently observed in never married and divorced individuals.¹⁶ Among the participants those who were divorced/separated from their spouse had more problem use of alcohol, which was statistically significant with a p-value of (0.026).

The results from Kolkata study using AUDIT (Bangla translation) showed that 65.8% of their participants were current alcohol consumers in the 1 year preceding survey and our study revealed that 65% of the participants had used alcohol in the last 1 year.¹⁵ The study done among industrial workers of Goa using AUDIT (Konkani) in 2003 among industrial workers showed a prevalence of hazardous drinking indicated by AUDIT scores more than 8 was 21%, which was comparable to the present study 18%.¹⁷ Our study results when compared to the study done by Sujith D Rathode et al in 2015 in Sehore district of Madhya Pradesh found that AUDIT scores were positively related to educational attainment, urban residence and high-quality housing. Our study showed that educational status had no relation to AUDIT scores, but BPL ration card status was positively related to AUDIT scores.¹⁸ Among the participants, 84% were aware about alcohol de-addiction treatment, but majority (83%) reported that they were not interested in

taking the same. The main reasons stated were fear of adverse effects of drugs and treatment expense. In Sehore study, adults who had AUD who didn't seek treatment from a medical provider were likely to feel personal shame.¹⁸ An enquiry into substance use other than alcohol revealed that 78% had nicotine use the results are comparable to study done by Deepak Gauba et al in 2016, which showed a prevalence of 78% for nicotine use disorders.¹⁹

CONCLUSION

The study could conclude that alcohol use problems exist among the study population. Those with unstable marital relationship and BPL status had high alcohol use problems. Most of the participants had lifetime use of alcohol and use in last 1 year. 18 percent of respondents had cutoff scores of 8 or more on AUDIT. Majority had heard about alcohol de-addiction treatment, but were reluctant to undergo the same, the main reason being adverse effect of drugs and treatment expense, associated major substance of abuse was nicotine.

LIMITATIONS

The target population are just a representative of the general population. There may be problems due to minimisation and denial of substance use. The sample size was small. All limitations of a community survey are present.

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