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Original Research Article

Socio-economic and cultural factors among patients with alcoholic liver disease at a tertiary care center in Southern IndiaKarthik Thamarai Kannan ^{*1} and Peter George²¹Resident, ²Professor, Department of General Medicine, Father Muller Medical College, Mangaluru– 575002, S India

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Father Muller Road, Mangaluru, 575002 S India***Article History:****Received:** 12/05/2017**Revised:** 15/05/2017**Accepted:** 16/05/2017**DOI:** <https://doi.org/10.7439/ijbr.v8i5.4158>**Abstract****Background:** Alcohol related liver diseases are common in most countries across the world. A variety of factors have been identified at the individual and community level affecting the patterns and amount of alcohol consumption. This study was done to determine such factors among patients with alcohol related liver disease.**Aim:** To study the socio-economic and cultural factors among patients with alcoholic liver disease at a tertiary care center in Southern India.**Materials & methods:** This observational questionnaire based study was done among patients with alcoholic liver disease, who were on regular follow up at a tertiary hospital in Mangaluru, Southern India. After a written informed consent, patients fulfilling the selection criteria were selected to the study. They were interviewed based on a preformatted proforma. The collected data were analyzed for mean, standard deviation and chi square test using SPSS-21.**Results:** The subjects (n=100) studied were Kannada, Malayalam, Konkani and Tulu speaking in the age group between 18 to 60 years. In this study 43% subjects were in the age group 35-44 years and 39% of them were married. Among these 96% consumed mixed diet and only 9% did daily physical activity. The educational background found was; middle school (29%), diploma holders (26%), high school (19%), college graduates (16%), primary school (6%) and illiterates (4%). Based on occupation status, 6% were professionals, 29% farmers/shop owners, 6% skilled worker, 29% unskilled worker and 13% unemployed. We found 22% to be binge drinkers and 78% to consume alcohol daily; 15% requiring an eye-opener.**Conclusion:** As seen in similar studies, the alcohol is a predominant problem in the uneducated, low earning, and stressed individuals in a society. The alcohol related health issues are global and dependent on multiple social and cultural factors. Improving the public awareness on alcohol related health issues is the key to minimize its burden in the society.**Keywords:** Alcoholic liver disease, social factors, cultural factors, Socio-economic status, Demography.**1. Introduction**

According to a WHO report in January 2015, 3.3 million deaths occur every year from harmful use of alcohol. A variety of factors have been identified at the individual and the social level, which affect the quantity and patterns of alcohol consumption and the magnitude of alcohol-related problems. These factors vary from the economic status, cultural background, educational level, physical and psychological state. Alcoholic liver disease (ALD) comprises a spectrum of injury, ranging from simple

steatosis to cirrhosis. Among chronic heavy alcohol drinkers only 15-20% develops hepatitis or cirrhosis.[1,2]

1.1 Aims and objectives:

To study the socio-economic and cultural factors in patients with alcoholic liver disease in Mangaluru.

2. Materials and methodology

2.1 Study design: Observational questionnaire based study.

2.2 Source of study: Patients with alcoholic liver disease attending the inpatient and outpatient services of a tertiary hospital in Mangaluru were sourced for the study. The study was done on 100 patients who fulfilled the selection criteria.

2.3 Methodology: After obtaining the Institutional Ethics Committee clearance patients who fulfilled the selection criteria were included in the study. An informed consent was obtained from them and subsequently interviewed with the validated questionnaire. They were screened for macrocytosis on peripheral smear or MCV>95%; an indirect indicator for alcohol abuse. The patient proforma captured details such as; gender, occupation, ethnicity, marital status, annual income, drinking pattern, dietary habits, age of onset of drinking, preferred alcoholic beverage, daily/binge drinking, education, smoking and daily physical activity. The data was analyzed for mean, standard deviation and Chi-square test using SPSS-11.

2.4 Inclusion criteria: (1) Patients >18 years of age.

2.5 Exclusion criteria: (1) Patients with hepatocellular carcinoma.

3. Results

In this study, 43% of patients were in the age group of 35-44, 26% each in age groups of 25-34 and 45-60. There were 35 (Kannada), 23 (Tulu), 19 (Malayalam) and 23 (Konkani) speaking patients in the selected group. Among the 100 individuals 61 were married.

In this study, 96% subjects were on mixed diet and 4% on vegetarian diet. Among the subjects 52% were smokers and 48% non-smokers. Only 9% had intentional physical activity. In this study group 22% were binge drinkers and 78% consumed alcohol every day; with 15% requiring an eye-opener. The socioeconomic status based on Kuppuswamy scale with the consumer price index for industrial workers was 278.

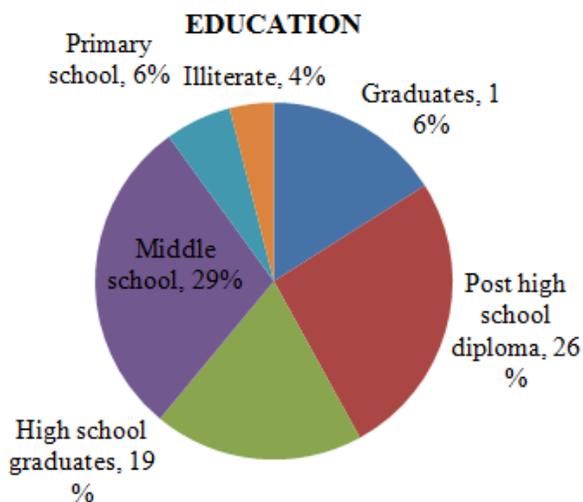


Figure 1: The 'pie chart' showing the educational level.

On their educational status (Figure 1), 16% were college graduates, 26% were diploma holders and 4% illiterates. Among the remaining; 19 studied up to high school, 29 till middle school and 6 till primary school.

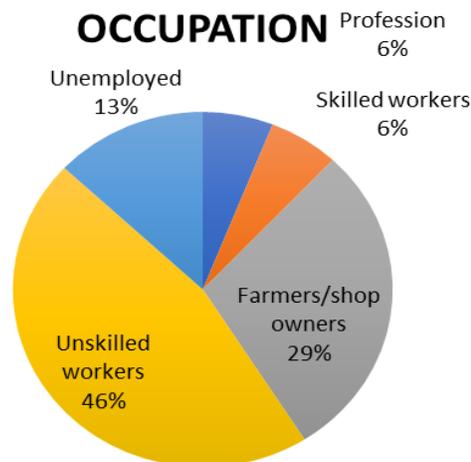


Figure 2: The 'pie-chart' showing the employment of patients

Based on employment (Figure 2), 6% were professionals, 29% farmers / shop owners, 6% skilled worker, 29% unskilled worker and 13% were unemployed. Based on monthly income of their family; 4% subjects had income above 45,000 INR; 23% had between 16,000 and 21,000; 26% had 10,000 to 16,000; 34% had 6,500 to 10,000 and 13% had 2,000 to 6,500.

4. Discussion

In 2010, cirrhosis of liver was responsible for 1,030,800 deaths across the world. Of all deaths from cirrhosis, 47.9 % deaths were attributable to alcohol. It represented 0.7% and 1.2 % of all deaths of women and men respectively.[3,4]

Singh *et al* (2000) found mortality in cirrhosis to be high among American Indians.[5] Stinson *et al* observed cirrhotic white Hispanic men to have high mortality rates, followed by black non-Hispanic and white non-Hispanic men.[6] In the current study no significant variations were found in our multilingual groups.

Herttua *et al* found alcohol related deaths to be higher among unskilled workers (285/100,000) as to upper white-collared peers (82/100,000). He found unemployed men to have a seven-fold increase in alcohol related deaths as compared to employed men.[7] In the present study 6% were professionals, 29% farmers/shop owners, 6% skilled worker, 29% unskilled worker and 13% unemployed. Herttua *et al* found low income males to have a six-fold increase in alcohol related death as compared to high income counterparts. Makela *et al* observed acute and chronic alcohol-related mortality to be higher in low

socioeconomic strata.[8] In this study only 4% had monthly income above INR 45000 and 13% had income below 6,500.

Van Oers *et al* noted a two-fold increase in excessive drinking among primary school dropouts as compared to university graduates, whereas in our study 58 % did not complete high school education.[9]

In a study by Pessione *et al* and Klatsky *et al* tobacco smoking was found to contribute to the worsening of cirrhosis.[10,11] Corrao *et al* noted coffee to be a protective factor and smoking as is faint risk factor for developing liver cirrhosis.[12] As in our study 52% of subjects were found to be smokers.

The US Department of Agriculture Dietary Guidelines has defined moderate drinking as 2 drinks/day for men and 1 drink/day for women; each drink containing approximately 12.5 g of ethanol. National Institute on Alcohol Abuse and Alcoholism, defines binge drinking as consumption of 5 or more drinks (male) or 4 or more drinks (female) in about 2 hours.[13]

Sorensen *et al* from Denmark, in a 13-year follow-up study found cirrhosis to develop in 7.5% of binge drinkers and 16.1% of daily drinkers.[14] Parrish *et al* in the United States, who evaluated the drinking pattern among patients with cirrhosis observed that 32% of them to be binge drinkers.[15] In this study, 22% were found to be binge drinkers and 78% consume alcohol daily; with 15% requiring an eye-opener.

Murphy *et al*, among heavy social drinkers, found that aerobic exercise and meditation has significantly reduced alcohol consumption.[16] In our study, only 9% of them are involved in daily physical activity like sports or yoga.

5. Conclusion

As seen with similar studies, we found that alcohol related health issues to be a predominant problem in the uneducated, low earning, stressed out and underprivileged individuals in the society. The alcohol related health issues are global and dependent on multiple social and cultural factors. Improving the public awareness on alcohol related health issues is the key to minimize its burden in the society. Other measures are to impose more taxes on alcohol and to limit its availability.[17]

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