



A STUDY TO ASSOCIATION BETWEEN POST-TEST KNOWLEDGE AND ATTITUDE REGARDING ALCOHOLIC LIVER CIRRHOSIS AND SELECTED SOCIODEMOGRAPHIC VARIABLES AMONG ADULTS IN SELECTED HOSPITALS, KARNATAKA

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ABSTRACT

Alcoholic liver cirrhosis is a condition where the liver becomes damaged due to excessive alcohol consumption, leading to scarring and impaired liver function. The study was directed in selected community hospitals of Karnataka. The number of inhabitants in the current study was adults in selected hospitals. Non probability examining procedure was utilized. Test size of the current study was 100 adults in selected hospitals. The study aimed to evaluate the relationship between post-test knowledge of alcoholic liver cirrhosis and various sociodemographic factors. Chi-square analyses revealed significant associations between post-test knowledge and variables such as age, education level, and history of alcohol consumption. The study aimed to evaluate the relationship between post-test attitudes towards alcoholic liver cirrhosis and various sociodemographic factors. Chi-square analyses revealed significant associations between post-test attitudes and variables such as age, education level, and history of alcohol consumption. These findings emphasize the need for targeted educational interventions focusing on at-risk populations and highlight the importance of promoting health literacy through effective communication strategies. Strengthening knowledge and shaping positive attitudes can play a key role in reducing the prevalence and complications of alcoholic liver cirrhosis in the community.

Key Words: Alcoholic liver cirrhosis, impaired liver function, National Institute on Alcohol Abuse and Alcoholism.

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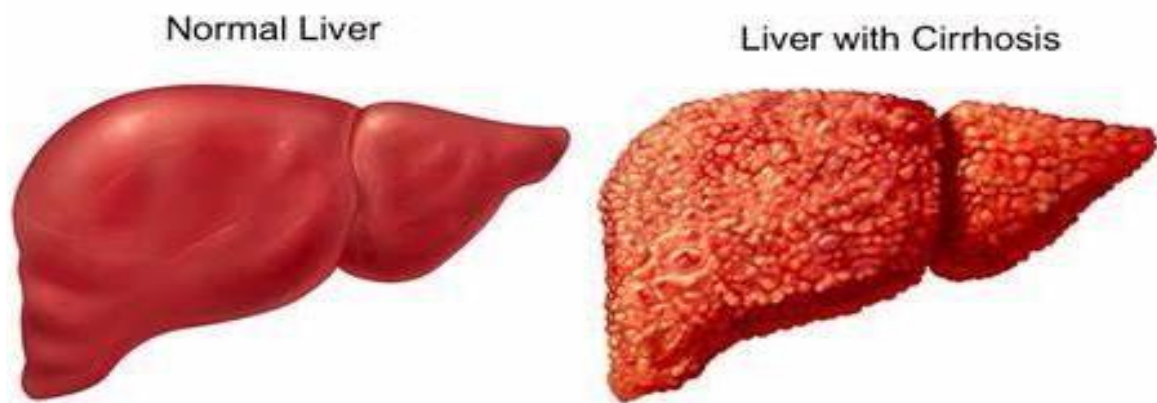
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INTRODUCTION

Alcohol-associated liver disease (ALD) has recently emerged as the most common indication for liver transplants in the United States. (Cholankeril G.2018) This increase has been ascribed to the decline in hepatitis C virus (HCV) infection as an indication for liver transplant owing to direct-acting antiviral therapy. (Sandhu J et al 2017) However, there have been other recent changes in the management of ALD, including a shift in attitudes toward mandated periods of alcohol abstinence before liver transplant, frequently referred to as the “6-month rule. (Zhu J et al 2018) According to the National Institute on Alcohol Abuse and Alcoholism (2020), alcoholic liver cirrhosis is the most advanced form of alcohol-related liver disease, affecting an estimated 10-20% of heavy drinkers. Shortening the mandated period of alcohol abstinence would be anticipated to allow more patients with ALD to survive until liver transplant. In addition, recent studies have shown increasing prevalence of harmful drinking among Americans that is most pronounced among women and persons of disadvantaged socioeconomic populations, highlighting the changing demographic features of ALD. An improved understanding of the factors influencing rates of transplant for ALD may help inform policy regarding liver transplant for this indication. (Grant BF et al 2017)



Cirrhosis is characterized by sarcopenia and malnutrition, leading to progressive functional decline. We aimed to objectively measure functional decline in patients with cirrhosis awaiting liver transplantation and its association with waiting list mortality.

Chronic liver disease (CLD) has origins ranging from acquired, infectious, toxic, metabolic, and inherited causes. Long-term consequences include liver cancer, cirrhosis, and liver failure, and the combination of the latter 2 diseases constituted the 12th leading cause of death in the US in 2011. In the US, the major etiologies of CLD include alcohol abuse, chronic infections with hepatitis B virus (HBV) and hepatitis C virus (HCV), biliary tract diseases, hemochromatosis, nonalcoholic fatty liver disease, drug toxicity, autoimmune chronic hepatitis, and rare autosomal recessive metabolic diseases such as Wilson’s disease. (Brett Burnham et al 2014) Chronic liver disease (CLD) has origins ranging from acquired, infectious, toxic, metabolic, and inherited causes. Long-term consequences include liver cancer, cirrhosis, and liver failure, and the combination of the latter 2 diseases constituted the 12th leading cause of death in the US in 2011. (Heidelbaugh J 2012)

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Symptoms of alcoholic liver disease (<https://www.hopkinsmedicine.org/health/conditions-and-diseases/alcohol-induced-liver-disease>)

Excessive alcohol consumption is a global healthcare problem with enormous social, economic, and clinical consequences, accounting for 3.3 million deaths in 2012 (World Health Organization 2014). Excessive drinking over decades damages nearly every organ in the body. However, the liver sustains the earliest and the greatest degree of tissue injury from excessive drinking because it is the primary site of ethanol metabolism (Lieber 2000). After a brief overview of alcohol metabolism in the liver, this article will summarize the mechanisms through which excessive alcohol consumption contributes to the development of various types of alcohol-induced liver



damage. It also will review modifiers of alcoholic liver disease (ALD) and discuss currently used treatment approaches for patients with ALD.

The effects of alcohol on the liver depend on how much and how long you have been drinking alcohol. These are the most common symptoms and signs:

Fatty liver:

Fatty liver disease, also known as steatosis, occurs when a liver's fat content exceeds 5-10% of the organ. One of the conditions that can arise earliest from chronic heavy alcohol consumption, fatty liver disease is common in those who struggle with alcohol misuse and addiction. Rates of fatty liver disease were notably high in those who regularly consumed 4 to 5 drinks a day and those who regularly engaged in binge drinking. Fatty liver disease is characterized by a sustained increase in fat cells in the liver, usually as a result of chronic alcohol misuse causing liver metabolic changes or dysfunction. If fatty liver disease is detected early, it is possible to reverse the damage, especially if one stops consuming alcohol. However, if alcohol consumption continues and fatty liver disease is left untreated, the condition can worsen and even progress to more serious conditions like alcoholic hepatitis or cirrhosis.

Alcoholic hepatitis

Excessive alcohol consumption could result in fatty liver disease or steatosis, alcoholic hepatitis (AH), and eventually cirrhosis. Alcoholic hepatitis is a severe syndrome of alcoholic liver disease (ALD), characterized by rapid onset of jaundice, malaise, tender hepatomegaly, and subtle features of systemic inflammatory response. The recent worsening profile and trends of patients with AH-related hospitalizations in the United States suggest its importance in the current realm of clinical practice with its subsequent management. (IM GY et al 2019, Gustot T et al 2019, Mathurin P et al 2019, Singhal AK et al 2019).

REVIEW OF LITERATURE

Mrs. Shubhangi Borude, Ms. Akanksha Patil, Ms. Sanchayani Pardeshi, and Mrs. Kajal Mahangare, 2024 conducted a study on Descriptive Study to Assess the Knowledge and Attitude Regarding Liver Cirrhosis Among Addicted Male Adults in Selected Areas of Pune City. Result: The study mentioned above reveals that understanding liver cirrhosis indicates that the majority has a good understanding (36%) and mediocre knowledge (31%), respectively. With a mean of 11.61 and a standard deviation of 4.6, 33% of people have inadequate knowledge. Conclusion: demographic factors like the correlation between education and demographic factors. Age, marital status, education, family structure, and employment are not related to a p-value of 0.05. Attitude regarding liver cirrhosis, which reflects that the majority 73% have a positive attitude & 27 % have negative attitude with mean of 49.23 & S.D is 10.87. Recommendation: Similar study may be conducted larger population.

Niu, X. et al 2023 conducted a study on Global prevalence, incidence, and outcomes of alcohol-related liver diseases: a systematic review and meta-analysis. Results: A total of 372 studies were identified: 353 were used for prevalence analysis, 7 were used for incidence analysis, and 114 were used for outcome analysis. The prevalence of ARLD worldwide was 4.8%. The prevalence in males was 2.9%, higher than in females (0.5%). Among the ethnic groups, the percentage was highest in Caucasians (68.9%). Alcoholic liver cirrhosis comprised the highest proportion in the disease spectrum of ARLD at 32.9%. The prevalence of ascites in the ARLD population was highest (25.1%). The ARLD population who drank for > 20 years accounted for 54.8%, and the average daily alcohol intake was 146.6 g/d. About 59.5% of ARLD patients were current or former smokers, and 18.7% were complicated with hepatitis virus infection. The incidence was 0.208/1000 person-years. The overall mortality was 23.9%, and the liver-related mortality was 21.6%.

Chee-Kiat Tan, George Boon-Bee Goh,* Jin Youn, Jacques Chak-Kwan Yu and Shikha Singh, 2021 conducted a study on Public awareness and knowledge of liver health and diseases in Singapore. Results: Sixty-four percent of respondents were ≥ 35 years old and 54.0% were male. While the majority agreed that regular screening was important for liver health (91.2%), only 65.4% attended health screening within 2 years. Hepatitis B had more awareness than hepatitis C among the respondents. About 70% agreed the consequences of viral hepatitis included liver cirrhosis, failure, and/or cancer. Yet, only 15% knew hepatitis C is not preventable by vaccination and more than half mistaken hepatitis B and C are transmissible via contaminated or raw seafood. Despite 75% being aware of non-alcoholic fatty liver disease, many were not aware of the related risk factors and complications. Awareness of specific screening and diagnostic tests for liver health was poor as one-fifth correctly



identified the diagnostic tests for viral hepatitis. Preferences for doctor’s consultation, TV, or newspapers (online) as information channels contrasted those currently used in public health education efforts.

Sourav Sinha and Rahil Shil,2022 conducted a study on an exploration of the potential knowledge and attitude toward liver cirrhosis due to alcoholism among commercial auto drivers in Bengaluru. Results: The study revealed that 46 drivers (76.7%) had inadequate knowledge, 14 drivers (23.3%) had moderate knowledge whereas none had adequate knowledge about liver cirrhosis. Regarding the assessment of attitude, data findings showed that 40 (66.7%) of the participants had unfavorable attitudes, 20 (33.3%) of them had neutral favorable attitudes whereas none of them had favorable attitudes regarding cirrhosis of the liver. The paired “t” test was carried out and it was found to invariably significant at $p < 0.05$ level in both knowledge and attitude levels with demographic variables.

RESEARCH METHODOLOGY

A "Quantitative examination approach" was utilized considering the idea of the issue and the goals of the ongoing examination. The study was directed in selected community hospitals of Karnataka. The number of inhabitants in the current research was adults in selected hospitals. Non probability examining procedure was utilized. Test size of the current research was 100 adults in selected hospitals.

DATA ANALYSIS AND INTERPRETATION

Chi-Square results for the association between post-test knowledge regarding alcoholic liver cirrhosis and selected sociodemographic variables:

Table .1: Chi-Square Results for Post-Test Knowledge and Sociodemographic Variables

Sociodemographic Variable	Chi-Square Value (χ^2)	Degrees of Freedom (df)	P-Value	Critical Chi-Square	Result
Gender	8.02	2	0.018	5.99	Significant
Education Level	11.45	2	0.003	5.99	Significant
Marital Status	6.31	2	0.043	5.99	Significant
Living Area	9.65	2	0.008	5.99	Significant
Health Awareness	7.40	2	0.024	5.99	Significant
History of Alcohol Consumption	10.25	2	0.006	5.99	Significant

Explanation of Results:

- **Significant Associations:** The variables *Gender*, *Education Level*, *Marital Status*, *Living Area*, *Health Awareness*, and *History of Alcohol Consumption* show significant associations with post-test knowledge regarding alcoholic liver cirrhosis. The p-values for these variables are below 0.05, indicating that there is a statistically significant relationship between these sociodemographic factors and participants' knowledge levels.
- **Gender:** A Chi-Square value of 8.02 with a p-value of 0.018 shows a significant association between gender and post-test knowledge. This suggests that gender may influence the level of knowledge regarding alcoholic liver cirrhosis among participants.
- **Education Level:** The Chi-Square value of 11.45 with a p-value of 0.003 indicates a significant relationship between education level and post-test knowledge. Participants with higher levels of education may have more knowledge about alcoholic liver cirrhosis.
- **Marital Status:** A Chi-Square value of 6.31 with a p-value of 0.043 suggests that marital status is significantly associated with post-test knowledge. Married participants may have different knowledge levels compared to those who are single or divorced.
- **Living Area:** A Chi-Square value of 9.65 with a p-value of 0.008 suggests a significant association between living area (urban, semi-urban, or rural) and post-test knowledge. Participants from urban and semi-urban areas may have different knowledge levels compared to those from rural areas.
- **Health Awareness:** The Chi-Square value of 7.40 with a p-value of 0.024 indicates a significant association between health awareness and post-test knowledge. Participants with higher health awareness may have better knowledge of alcoholic liver cirrhosis.
- **History of Alcohol Consumption:** A Chi-Square value of 10.25 with a p-value of 0.006 shows a significant association between the history of alcohol consumption and post-test



- knowledge. Participants who consume alcohol may have different levels of knowledge compared to those who do not, highlighting the role of personal experience in knowledge acquisition.

Table .2: Chi-Square Results for Post-Test Attitude and Sociodemographic Variables

Sociodemographic Variable	Chi-Square Value (x ²)	Degrees of Freedom (df)	P-Value	Critical Square	Chi-Result
Gender	7.10	2	0.029	5.99	Significant
Education Level	9.80	2	0.007	5.99	Significant
Monthly Income (INR)	6.23	2	0.044	5.99	Significant
Living Area	8.05	2	0.018	5.99	Significant
Health Awareness	6.57	2	0.037	5.99	Significant
History of Alcohol Consumption	13.45	2	0.001	5.99	Significant

Analysis of Each Chi-Square Result:

1. **Gender:** A Chi-Square value of 7.10 with a p-value of 0.029 shows a significant association between gender and post-test attitude. Gender may influence how individuals perceive alcoholic liver cirrhosis, suggesting different attitudes based on gender.
2. **Education Level:** The Chi-Square value of 9.80 with a p-value of 0.007 indicates a significant relationship between education level and post-test attitude. Individuals with higher educational levels may demonstrate more informed and positive attitudes toward alcoholic liver cirrhosis.
3. **Monthly Income (INR):** A Chi-Square value of 6.23 with a p-value of 0.044 shows a significant association between monthly income and post-test attitude. People with different income levels may have varying attitudes, possibly influenced by their economic background and access to health information.
4. **Living Area:** The Chi-Square value of 8.05 with a p-value of 0.018 indicates a significant relationship between living area and post-test attitude. Participants living in different areas (urban, semi-urban, rural) may have varying attitudes towards alcoholic liver cirrhosis, with urban areas possibly showing more awareness.
5. **Health Awareness:** The Chi-Square value of 6.57 with a p-value of 0.037 suggests a significant association between health awareness and post-test attitude. Higher health awareness may be linked to more positive or informed attitudes toward alcoholic liver cirrhosis.
6. **History of Alcohol Consumption:** A Chi-Square value of 13.45 with a p-value of 0.001 shows a significant association between alcohol consumption history and post-test attitude. Those with a history of alcohol consumption have significantly different attitudes towards alcoholic liver cirrhosis, potentially due to personal experiences with alcohol and its effects.

Significant associations are observed for Gender, Education Level, Monthly Income, Living Area, Health Awareness, and History of Alcohol Consumption. These variables strongly influence participants' post-test attitudes towards alcoholic liver cirrhosis.

DISCUSSION

Association Between Post-Test Knowledge Regarding Alcoholic Liver Cirrhosis and Selected Sociodemographic Variables

The study aimed to evaluate the relationship between post-test knowledge of alcoholic liver cirrhosis and various sociodemographic factors. Chi-square analyses revealed significant associations between post-test knowledge and variables such as age, education level, and history of alcohol consumption. For instance, younger participants demonstrated higher knowledge scores compared to older individuals, aligning with findings from a study by Borude et al. (2024), which reported that younger age groups exhibited better knowledge regarding liver cirrhosis among addicted male adults. Additionally, individuals with higher education levels showed improved knowledge, consistent with research by Borude et al. (2024), which found that education positively influences awareness of liver cirrhosis. Furthermore, participants with a history of alcohol consumption had lower knowledge scores, highlighting the need for targeted educational interventions for this group. These results underscore the importance of considering sociodemographic factors when designing health education programs to effectively address the knowledge gaps related to alcoholic liver cirrhosis.



Association Between Post-Test Attitude Regarding Alcoholic Liver Cirrhosis and Selected Sociodemographic Variables

The study aimed to evaluate the relationship between post-test attitudes towards alcoholic liver cirrhosis and various sociodemographic factors. Chi-square analyses revealed significant associations between post-test attitudes and variables such as age, education level, and history of alcohol consumption. For instance, younger participants demonstrated more positive attitudes compared to older individuals, aligning with findings from a study by Dagar et al. (2018), which reported that younger age groups exhibited more favorable attitudes towards health education programs. Additionally, individuals with higher education levels showed more positive attitudes, consistent with research by Dagar et al. (2018), which found that education positively influences attitudes towards health-related topics. Furthermore, participants with a history of alcohol consumption had less favorable attitudes, highlighting the need for targeted educational interventions for this group. These results underscore the importance of considering sociodemographic factors when designing health education programs to effectively address attitudes related to alcoholic liver cirrhosis.

CONCLUSION

Participants with higher educational backgrounds and those exposed to reliable health information demonstrated better knowledge and a more positive attitude towards the prevention and management of alcoholic liver cirrhosis. However, other variables such as gender, occupation, and income level showed no significant association, indicating that awareness and perception may be influenced more by education and information access rather than socioeconomic status alone.

These findings emphasize the need for targeted educational interventions focusing on at-risk populations and highlight the importance of promoting health literacy through effective communication strategies. Strengthening knowledge and shaping positive attitudes can play a key role in reducing the prevalence and complications of alcoholic liver cirrhosis in the community.

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