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"PREVALENCE OF ALCOHOLISM AND ITS RELATED HEALTH PROBLEMS AMONG THE ADULT POPULATION IN RURAL COMMUNITY OF KAMRUP (M), ASSAM"

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ABSTRACT

Background: Alcoholism, or Alcohol Use Disorder (AUD), is a chronic condition marked by an inability to control alcohol consumption despite negative consequences. This disorder significantly impacts both mental and physical health, contributing to high morbidity and mortality globally. In India, diverse socio-cultural practices, varying state policies, and increasing urbanization have created a complex landscape of alcohol consumption, especially in rural areas.

Title: A study to assess the prevalence of alcoholism and its related health problems among the adult population in rural community of Kamrup (M), Assam.

Methodology: A descriptive survey was conducted to assess the prevalence of alcoholism and associated health issues among adults in the rural community of Kamrup (M), Assam. A multistage random sampling method selected 150 participants from the Chemical area under Panikhaiti MPHC, Sonapur zone. Data were gathered through structured interviews on alcohol consumption patterns and related health problems. Chi-square tests were utilized to analyse associations between alcoholism, health issues, and demographic variables.

Results: Of the 150 participants, 60.7% were alcohol consumers, with a preference for locally brewed alcohol. Common reasons for consumption were stress relief (14.3%) and recreation (72.5%). Significant health issues included diabetes (23.1%), peptic ulcers (18.7%), and high blood pressure (29.7%). Additionally, 20.9% of drinkers reported needing alcohol in the morning. Significant associations were found between alcoholism prevalence and factors such as age, gender, and monthly family income. Moreover, gender, marital status, and educational level were linked to specific alcohol-related health problems like diabetes, peptic ulcers, and muscle weakness.

Conclusion: The study reveals a high prevalence of alcohol consumption in Kamrup (M), Assam, with considerable associated health risks. Public health interventions, including education and stricter alcohol policies.

Keywords: Alcohol Use Disorder, Alcoholism, Prevalence, Health Problems, Rural Community, Kamrup (M) Assam, India.

INTRODUCTION

"First you take a drink, then the drink takes a drink, then the drink takes you."

- F. Scott Fitzgerald

Background of the study

Alcoholism, also known as alcohol use disorder, is when a person drinks excessively and develops a physical dependence or addiction to alcohol. There are various treatment plans available. Alcoholism is also known as alcohol abuse and dependence. Today, it's known as alcohol consumption disorder. Alcoholism, also known as alcohol use disorder, happens when a person drinks excessively, causing their body to become reliant on or addicted to alcohol. There are various treatment plans available. Alcoholism has been referred to by a variety of names, including alcohol abuse and alcohol dependency. Today, it's known as alcohol consumption disorder.[1]

Individuals with alcohol use disorder may continue to drink despite unfavourable effects such as job loss or relationship breakdown. Although individuals are aware of the harmful impact of alcohol on their life, this is typically insufficient to motivate them to quit. People with alcohol use disorders will continue to drink even if it has severe repercussions, such as losing their jobs or damaging relationships with those they care about. They

may recognise that their alcohol usage negatively affects their life, but it's often not enough to get them to quit drinking.[1]

Alcoholic beverages have been around since the Vedic period and are used for worship, medical remedies, and as a sedative. Alcohol consumption is currently widespread and has steadily increased over the world. Every year, harmful alcohol use kills roughly 3.3 million people worldwide (5.9% of all fatalities), and alcohol consumption accounts for 5.1% of the global disease burden. It causes around 60 different illnesses and is the third leading risk factor for the global disease burden.[2]

The consumption of alcohol is a prevalent practice that varies across the globe. Ethyl alcohol, also known as alcohol, is consumed in diluted concentrations primarily as an alcoholic beverage. One serving of an alcoholic beverage typically contains 10 grams of absolute alcohol. The types of alcoholic beverages popular worldwide are beer, wine, whiskey, rum, vodka, gin, brandy, and locally made drinks, such as arrack and toddy. However, problematic drinking patterns can increase the risk of adverse health effects for individuals who engage in excessive alcohol consumption.[34]

One of the key outcomes of global addiction demand is the production of alcoholic beverages. In developing nations such as India, alcohol consumption poses significant challenges due to a variety of socio-cultural practices, differing alcohol regulations across states, a general lack of awareness regarding alcohol-related issues within communities, misleading media portrayals of alcohol use, diverse drinking behaviours among consumers, and the rise of social drinking habits fuelled by rapid urbanization. To mitigate alcohol consumption, it is essential to implement stricter alcohol policies across states and to educate consumers about the numerous detrimental effects of alcohol on their mental, physical, and spiritual well-being. This review article examines the impact of alcohol consumption, highlighting its harmful effects on both the mind and body, while also addressing the existing alcohol policies in the country.[34]

Need of the study

According to WHO data, alcohol was responsible for around 3 million deaths globally in 2016. Among these deaths, digestive diseases related to alcohol accounted for 21.3% of all alcohol-related deaths. Specifically, of the 637,000 alcohol-related deaths, 607,000 were due to alcohol-related liver diseases (ARLD). Consequently, ARLD has emerged as a leading cause of alcohol-related mortality .[4]

The “Global Status Report on Alcohol and Health 2018” states that currently, around 2.3 billion people are consuming alcohol globally, with over half the population in the USA, Europe, and the Western Pacific regularly drinking alcohol. Chronic heavy drinking is often the root cause or a risk factor for many conditions, including alcohol-related liver diseases (ARLD), acute pancreatitis, and alcohol-related cardiomyopathy.[3]

According to the “National Family Health Survey-5 (NFHS-5) conducted between 2019-21, alcohol consumption” is more prevalent in rural areas of India compared to urban areas for both men and women. The survey found that “1% of women aged 15 and above consume alcohol”, while 19% of men in the same age

group do. The breakdown shows that 1.6% of rural women drink alcohol compared to 0.6% in urban areas, while among men, the figures are “19.9% and 16.5%, respectively. Arunachal Pradesh” reports the highest alcohol consumption, with 53% of men and 24% of women drinking. For women, Sikkim follows with 16%, and for men, Telangana ranks second with 43%. Other areas where alcohol consumption among men exceeds 40% include “the upper Brahmaputra region of Assam, certain districts in Jharkhand and the Bastar region of Chhattisgarh, as well as the Chhota Nagpur region spanning Jharkhand and Odisha”.[5]

In 2010, the 12-month prevalence of alcohol use disorders in India was 2.6%, with alcohol dependence at 2.1%. In 2012, 33.1% of all road traffic deaths were caused by drunk driving. According to India's National Mental Health Survey 2015-16, 9% of adult men suffer from alcohol use disorders. In India, the alcohol-related fraction (AAF) of all cause deaths was determined to be 5.4%. Alcohol consumption was responsible for approximately 62.9% of all liver cirrhosis-related deaths.[6]

According to data from the excise department, alcohol consumption in Guwahati has been increasing, with the city consuming 14,282,618.65 litres of alcohol by November 30, 2022. A London Proof Litre (LPL) bottle holds 750 millilitres, and a case contains 12 bottles. One case is equivalent to nine bulk litres (nine litres). This figure includes the total volume of beer and liquor produced in India and consumed between January and November 2021. [7]

Sources indicate that Guwahati residents consumed over 7,650,314.38 litres of Indian Made Foreign Liquor (IMFL) and more than 6,632,304.27 litres of beer, totalling over 1.42 crore litres in the first eleven months of 2022. In comparison, approximately 126 lakh litres were consumed in the same period in 2021.[7]

A source from the excise department revealed to the media that alcohol consumption in Guwahati has increased by 15% for both beer and Indian-made foreign liquor (IMFL). The source also noted that 2022 marks the highest alcohol consumption rate in the city since 2015.[7]

Alcohol consumption can cause many physical, mental and social problems therefore, by looking to the above scenario researcher felt the need to conduct the study to assess the prevalence of alcoholism and “its related health” problems “among the adult population in” rural community.

Statement of the problem

A study to assess the prevalence of alcoholism and its related health problems among the adult population in rural community of Kamrup (M), Assam.

Objectives of the study

1. To assess the prevalence of alcoholism among the adult population in rural community of Kamrup (M), Assam.

2. To find out the related health problems of alcoholism among the adult population in rural community of Kamrup (M), Assam.

3. To find out the association between prevalence of alcoholism among the adult population in rural community with selected demographic variables.

4. To find out the association between related health problems of alcoholism among the adult population in rural community with selected demographic variables.

Operational definition

Assess: According to oxford dictionary , it refers to "make a judgement about the nature or quality of somebody/something." [37]

In this study, it refers to find out the prevalence of alcoholism and its related health problems among the adult population in rural community of Kamrup (M), Assam.

Prevalence: "According to WHO prevalence measures the frequency of existing disease in a defined population at a specific time. Numerator: Total number of infections. Denominator: Total population." [42]

In this study, prevalence refers to the total number of individuals in a population who consumes alcohol regularly.

Alcoholism: According to oxford dictionary the medical condition caused by drinking too much alcohol regularly.[37]

In this study, Alcoholism refers to person who consumes alcohol regularly in any form and the user may display a sense of physiological and social signs and symptoms.

Health related problems: "According to oxford dictionary a health issue can correspond to a health problem, a disease, an illness or another kind of health condition".[37]

In this study, health-related problems refer to issues resulting from alcohol consumption. Like diabetes, peptic ulcers, high blood pressure, liver disease, disturbed daily activity, muscle weakness/cramping, irritability, disturbed sleep, craving for alcohol, and tremors.

Adult: "According to WHO an adult is a person older than 19 years of age unless national law defines a person as being an adult at an earlier age." [40]

In this study, adult refers to individuals aged 20 years and older.

Hypotheses

All hypothesis were tested at 0.05 level of significance.

H_1: There is significant association between prevalence of alcoholism among the adult population with selected demographic variables.

H_2: There is significant association between related health problems of alcoholism among the adult population with selected demographic variables.

Assumptions

- Alcohol prevails among the adult population in rural community.
- There may be presence of health-related problems that is associated with alcoholism.

Delimitations

- The study is delimited to adult population aged from 20 years and above in selected rural community .

RESEARCH METHODOLOGY

Methodology of research indicates the general plan, the procedure for empirical study together with the method of obtaining valid and reliable data on problem and investigation. Typically, it encompasses concepts such as phases and techniques. A methodology offers the theoretical underpinning for understanding which method or sets of methods can be applied to calculate a specific result. Research Methodology is the specific procedures or techniques used to identify, select, process and analyse information about a topic.[33]

The research goes according to the methodology chosen for the fulfilment of the objectives and according to the type of research. This chapter deals with the various steps taken by the investigator to conduct the study.

Research approach

It "is a plan and procedure that consists of the steps of broad assumptions to detailed methods of data collection, analysis and interpretation".[33]

Quantitative Survey Research Approach was adopted for this study with an aim to assess prevalence of alcoholism and its related health problems among the adult population in rural community of Kamrup (M), Assam. Quantitative Survey Research Approach is a method of collecting and analyzing data from a sample. To learn about their opinion, behaviors or characteristics. In this type of research, data is collected in numerical form and analyzed by using descriptive or inferential statistics. Quantitative research involves analysis of numerical data.

Research design

It is a master plan specifying the methods and procedures for collecting and analyzing the needed information in a research study.[33]

Descriptive Survey Research Design is undertaken to describe the frequency of occurrence of a phenomenon rather than to study relationship.[33]

Descriptive Survey Research Design was adopted for this study with an aim to assess prevalence of alcoholism and its related health problems among the adult population in rural community of Kamrup (M), Assam.

Research setting

The setting is the physical location takes place in a study. It is important to select and appreciate setting where the study will be feasible in terms of cooperation of the members, transportation facilities, availability of the subject from whom the data will be collected. Research setting are the specific areas from where the data are collected.[33]

The study was conducted in rural community of Kamrup (M), Assam. Namely Chemical village, under Panikhaiti MPHC of Sonapur zone.

There are 12 Health facilities Sonapur, these are, chnadrapur PHC, Digaru SD, Dimoria SD, Hahara MPHC, Hatibagara MPHC, Kamarpur MPHC, Khetri, Molaibari MPHC, Nortap MPHC, Panikhaiti MPHC, Sonapur PHC and Tamulikuchi SD. [32] (Annexure XI)

Panikhaiti MPHC is located in Thakurkuchi village in Chandrapur Tehsil in Kamrup (M), Assam. According to 2011 census, the local language of Panikhaiti is Assamese. "Total population is 3817 and number of houses are 752. Female population is 48.8%. village literacy rate is 66.0% and the female literacy rate is 29.2%". there is total 11 number of villages namely, Thakurkuchi, Digarumukh, Bhagdara, Nulghuli, Milan Nagar, Cha. Bagicha, Aranyanagar, Singimari, Akasinagar, Nizaraparand and Chemical under Panikhaiti MPHC.[41]

Chemical village is one of the villages under the Panikhaiti MPHC, with a total population of 281 residing in 53 households. The village has 141 females and 140 males, with a total of 234 adults aged 19 and above.

Population

Population is the entire set of individuals having some common characteristics selected for research study. In other words, it is the set of people or entities to which the results of a research are to be generalized. A target population consists of the total number of people or objects which are meeting the designated criteria.[33]

In this study population is all the adult population in rural community.

Target population: The target population is all the adult population of rural community of Kamrup (M), Assam.

Accessible Population: The accessible population is all the adult population in selected rural community of Kamrup (M), Assam.

Sample and sample size

"Sample is the entire set of individuals or objects having some common characteristics selected for a research study, sometimes referred to as the universe of the research study".[33]

The study sample consists of adults selected from rural community of Guwahati, Assam. The sample size was determined using calculator.net sample size calculator. Out of total 234 adult population of a randomly selected village i.e. Chemical village. Sample size of 150 adults were taken for the study with 5% margin of error, 95% confidence level and population proportion of 50%.

Sampling technique

The process of selecting a representative unit from an entire population of a study is called Sampling.[33]

For this study, Multistage random sampling technique was adopted.

Stage I: Out of 6(six) Sub-District namely Capital Zone, Dhirenpara Zone, East Zone, Sonapur, West Zone and Others in Kamrup (M), only 1 Sub-District namely Sonapur was selected randomly. The investigator considered Sonapur for rural population.[32] (Annexure XI)

Stage II: There are 12(twelve) Health Facility Centres under Sonapur. These are Chandrapur PHC, Digaru SD, Dimoria SD, Hahara MPHC, Hathibagara MPHC, Kamarpur MPHC, Khetri SD, Maloibari MPHC, Nortap MPHC, Panikhaiti MPHC, Sonapur PHC and Tamulikuchi SD." Out of which only Panikhaiti MPHC was selected randomly for the rural population in the main study.[32] (Annexure XI)

Stage III: There is total 11 (eleven) numbers of villages namely Thakurkuchi, Digaramukh, Nalghuli, Milan Nagar, Aryanagar, Singimari, Akasinagar, Bagdhara, Nirzarapar, Ch. Bagicha and Chemical under Panikhaiti MPHC. Out of which one village i.e. Chemical, was selected randomly for the main study.

Stage IV: The subjects i.e. adult population was selected with the help of records and registers. The sample size was determined using calculator.net sample size calculator. Out of total 234 adult population from chemical village, 150 adults were taken for the study with 5 percent margin of error, 95 percent confidence level and population proportion of 50 percent.

Sampling criteria

"Sampling criteria refers to the essential characteristics of a subject or respondents such as ability to read and write responses on the data collection instruments".[33]

The following criterion was used in the present study to select the samples.

- **Inclusion criteria**: Those who are willing to participate in the study .
- **Exclusion criteria**: Those who were not available at the time of data collection .

Variables

"Variables are qualities, properties, or characteristics of person, things, or situations that change or vary".[33]

Research Variables: "Research variables can be defined as qualities, attributes, properties, or characteristics that are observed or measured in a natural setting without manipulating, and establishing cause-and-effect relationship in descriptive, exploratory, comparative and qualitative research studies." [33]

In this study, the research variable is Prevalence of alcoholism and its related health problems among adult population in rural community of Kamrup (M), Assam.

Demographic Variable: In most of the research studies, researcher makes the attempt to study the sample characteristics and present them in research findings. These characteristics and attributes of the study subjects are considered as demographic variables. [33]

Demographic variables included in the study are age, gender, marital status, monthly family income, religion, type of family and educational status.

Tools and technique

Development of the tool

"A research instrument is a device used to measure the concept of interest in a research project that a researcher uses to collect data." [33]

In the present study, the tools were developed and prepared by undertaking the following steps

- Review of literature.
- Blue print was prepared .

A structured interview questionnaire was developed, with one section containing 10 questions focused on the prevalence of alcoholism and another section containing 10 questions addressing related health problems.

- Discussion and suggestions from guide and co-guide and discussion with experts.
- Establishing validity and reliability of the tool.

Description of tool

Based on the problem statement, objectives and operational definitions of the study, the tool was developed to gather the data. The tool for collecting data was a structured interview schedule which consists of the following sections: Section I, Section II, and Section III.

Section I: Demographic Proforma

This section was prepared to collect background information regarding demographic variables such as age, gender, marital status, religion, type of family, monthly family income, and educational status.

Section II: Structured interview schedule on prevalence of alcoholism

This section is prepared to assess the prevalence of alcoholism among adult population in rural community of Kamrup (M), Assam. This section consists of 10 questions.

Section III: Structured interview schedule on related health problems of alcoholism

This section is prepared to assess the related health problems of alcoholism among adult population in rural community of Kamrup (M), Assam. This section consists of 10 questions.

Validity of the tool

"Validity of an instrument refers to the degree to which an instrument measures what it is supposed to be measuring".[33]

The tool with the problem statement, objectives, hypotheses, demographic Performa, structured interview schedule to assess the prevalence was prepared and validation certificate was given to seven (7) experts. Among them three (3) were from Community Health Nursing department, three (3) from Medical Surgical Nursing department and 1 (one) was a doctor MD Community medicine Assistant professor, community medicine department. The tool consisted of total 24 questionnaires which were modified and prepared as per suggestions and advice by the experts. On the basis of suggestions given by experts, items were modified. Finally, with 100% agreement the approved items were used in the study.

Reliability of the tool

"Reliability is the degree of consistency with which the attributes or variables are measured by an instrument".[33]

The reliability of the tool has been done by using Split Half method followed by spearman's brown prophecy formula. There were total of 20 items in the structured interview questionnaire. The reliability was found to be r= 0.86 which is statistically significant, thus the tool is reliable to carry out the study.

Pilot study

The study, conducted from January 24-26, 2024 at the selected area that is Thakurkuchi under Panikhaiti MPHC of Kamrup (M), Assam, among 20 adults. Multistage random sampling technique was used for the study. The findings show that 14 (70%) of participants consumed alcohol, mainly local beverages, with 10 (71%) citing fun as their primary reason. A significant 12 (86%) had been drinking for three years or more, with 10 (71%) consuming alcohol 2-3 days a week and 8 (57%) daily. Health issues reported included diabetes 5 (36%), peptic ulcer 7 (50%), high blood pressure 2 (14%), liver disease 3 (21%), muscle weakness/cramping 3 (21%) irritability 5 (36%), disturbed daily activity 7 (50%), disturbed sleep 3 (21%), craving for alcohol 3 (21%), tremor 6 (43%). This report concludes that there is no statistically significant association between the examined health problems related to alcoholism (diabetes, peptic ulcer, high blood pressure, liver disease, muscle weakness or cramping, irritability, disturbed daily activity, disturbed sleep, craving for alcohol, and tremors) and sociodemographic variables. This suggests that these health problems are equally likely to affect all individuals with alcoholism, regardless of their sociodemographic background.

Ethical consideration

"Ethics in nursing research is the act of moral principles which the researcher has to follow while conducting nursing research to ensure the right and welfare of individuals, group or community under study".[33]

In the present study, following ethical formalities were taken into consideration -

- The study was conducted after obtaining ethical approval from Institutional Ethical Committee of PEWS group of Institutions, Guwahati-26, Assam . (Annexure-I)
- Permission was taken from Sarkari Gaon Bura of Chemical, Kamrup Metropolitan District, Guwahati-1. (Annexure-X)
- Informed verbal consent was obtained from the adult population.
- Confidentiality was maintained during data collection.

Data collection procedure

"Data collection is the precise, systematic gathering of information relevant to the research purpose or the specific objectives, questions or hypotheses of a study".[33]

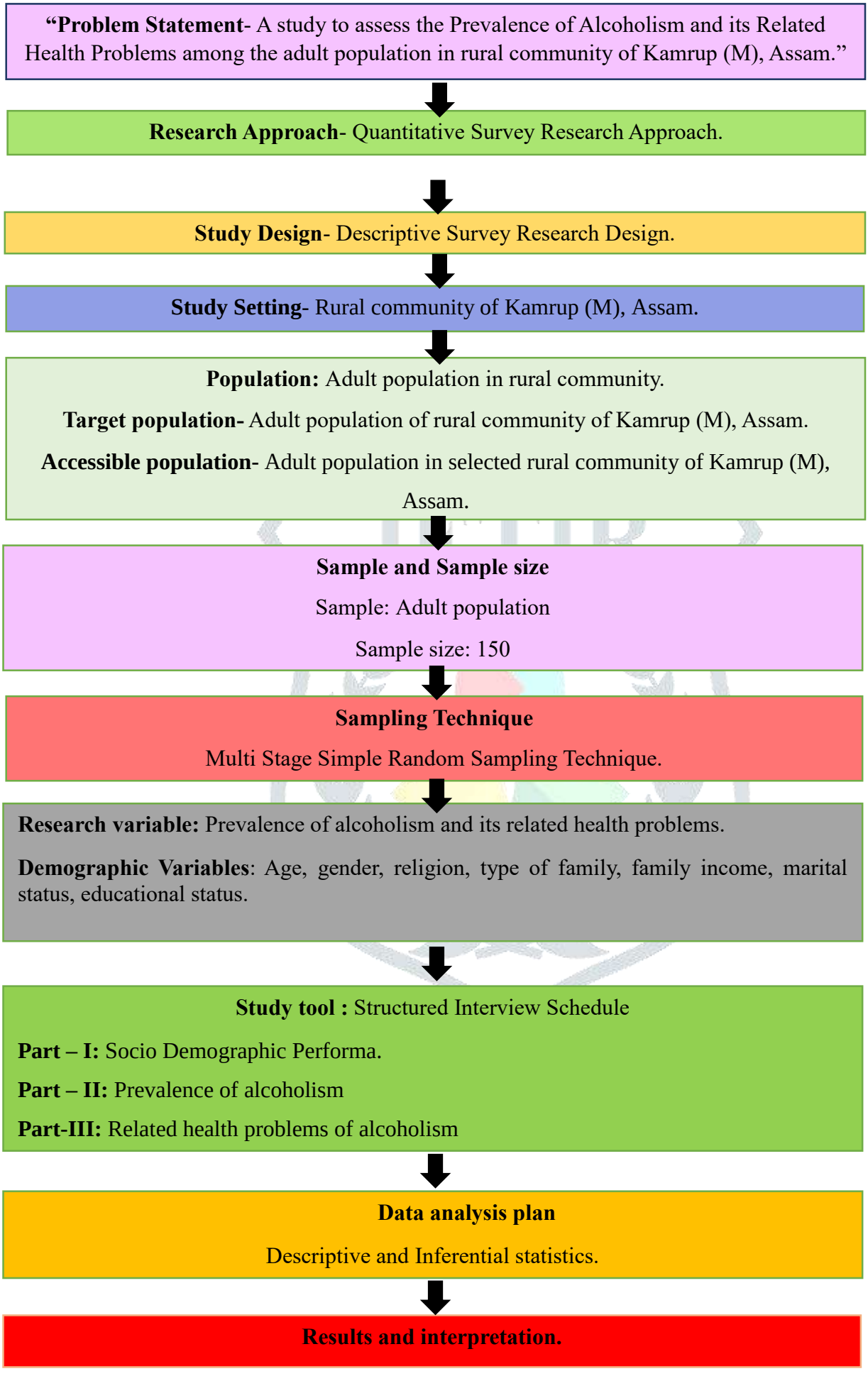
- After obtaining formal permission from the Sarkari Gaon bura, the study was conducted from 29th April to 25th May, 2024 in rural area. (Annexure-X)
- Rural community was selected by multistage random sampling technique .
- The subjects i.e. adult population were selected with the help of records and registers maintained by the ASHA. Purpose of the study was explained .
- Using calculator.net sample size calculator, Population size of 150 adults was taken for the study.
- Informed verbal consent was taken from the participants .
- Data was collected by using the technique of structure interview schedule.

Plan for data analysis

Data analysis is the technique used to reduce, organize and give meaning to data. [33]

The data collected from the subjects were organized and tabulated. The data were analysed using descriptive and inferential statistics.[33]

- Collected data were coded and transformed to the master sheet for statistical analysis.
- Frequency and percentage distribution to describe the demographic variables.
- Frequency and percentage distribution to describe prevalence of alcoholism and its related health problems among adult population.
- Chi-square test to find out associations between prevalence of alcoholism and its related health problems with socio-demographic variables .
- Analysed data were presented in tables, graph and figures .



ANALYSIS AND INTERPRETATION

FIGURE 2: Schematic representation of research methodology

Section-I: Frequency and percentage distribution of adult population according to demographic variables.

This section deals with the demographic variables such as age, gender, marital status, religion, type of the family, monthly family income, and educational status . The demographic variables were summarized in terms of frequency and percentage distribution.

The findings are shown on the table 1.1 to 1.7 and figure 3.1 to 3.7.

TABLE 1.1

Frequency and percentage distribution of adult population according to age.

n=150

Age in years	Frequency(f)	Percentage (%)
19-29	42	28
30-39	35	23.4
40-49	36	24
50-59	29	19.3
60 and above	8	5.3
Total	**150**	**100**

The data presented in table 1.1 , shows that out of 150 adults' majority i.e. 42 (28%) were of age group of 19-29 years, 36 (24%) were of age group 40-49 years, 35 (23.4%) were of age group 30-39 years, 29 (19.3%) were of age group 50-59 years and 8 (5.3%) were of age 60 years and above.

TABLE 1.2

Frequency and percentage distribution of adult population according to gender.

n=150

Gender	Frequency(f)	Percentage (%)
Male	75	50
Female	75	50
Transgender	0	0
Total	**150**	**100**

Data presented in table 1.2. shows that out of 150 adults, 75 (50%) are male and 75 (50%) are female.

TABLE 1.3

Frequency and percentage distribution of adult population according to marital status

n=150

Marital status	Frequency(f)	Percentage (%)
Married	69	46
Unmarried	55	36.7
Separated	2	1.3
Divorced	1	0.7
Widowed	23	15.3
Total	**150**	**100**

Data presented on table 1.3 shows that out of 150 adults' majority i.e. 69 (46%) of adult population were married, 55 (36.7%) were unmarried, 23 (15.3%) are widowed 2 (1.3%) were separated and 1 (0.7%) are divorced.

TABLE 1.4

Frequency and percentage distribution of adult population according to monthly family income.

n=150

Monthly family income	Frequency(f)	Percentage (%)
≥ 20,482	10	6.7
10,241 – 20,481	12	8
7,681 – 10,240	12	8
5,120 – 7,680	3	2
2,072 – 5,119	3	2
1,034 – 3,071	51	34
≤ 1,303	59	39.3
Total	**150**	**100**

Data presented in table 1.4 shows that out of 150 adults' majority i.e. 59 (39.3%) earn ≤ 1,303, 51 (34%) earn between 1,034-3,071, 12 (8%) earn between 7,68-10,240, 12 (8%) earn between 10,241-20,481, 10 (6.7%) earn ≥ 20,482, 3 (2%) earn between 5,120-7,680, and 3 (2%) earn between 2,072-5,119.

TABLE 1.5

Frequency and percentage distribution of adult population according to religion.

n=150

Religion	Frequency(f)	Percentage (%)
Hinduism	115	76.7
Islam	24	16
Christianity	0	0
Others	11	7.3
Total	**150**	**100**

Data presented on table 1.5 shows that out of 150 adults' majority i.e. 115 (76.7%) followed Hinduism, 24 (16%) followed Islam, and 11 (7.3%) follow other religions, with no participants identifying as Christians.

FIGURE 3.5

Bar diagram showing percentage distribution of adult population according to religion.

TABLE 1.6

Frequency and percentage distribution of type adult population according to type of family.

n=150

Type of family	Frequency(f)	Percentage %
Nuclear family	4	2.7
Joint family	146	97.3
Total	**150**	**100**

Data presented on table 1.6 shows that out of 150 adults' majority i.e. 146 (97.3%) live in a joint family while 4 (2.7%) live in a nuclear family.

TABLE 1.7

Frequency and percentage distribution of adult population according to educational status.

n=150

Educational status	Frequency(f)	Percentage (%)
No formal education	0	0
Primary school	22	14.7
Middle school	20	13.3
High school	38	25.3
Higher secondary	62	41.4
Graduate	8	5.3
Total	**150**	**100**

Data presented on table 1.7 shows that out of 150 adults' majority i.e. 62 (41.4) completed higher secondary education, 38 (25.3%) attended high school, 22 (14.7%) attended primary school, 20 (13.3%) attended middle school, and 8 (5.3%) are graduates. There were no participants with no formal education.

Section II: Prevalence of alcoholism among adult population in rural community.

This section deals with the assessment of prevalence of alcoholism among adult population. The prevalence of alcoholism among adult population was assessed through structured interview schedule. The overall prevalence of alcoholism among adult population was computed in terms of frequency and percentage.

Prevalence measures the frequency of adult population who consumes alcohol regularly in defined population at a specific time.

$$\text{Prevalence rate} = \frac{\text{Total no. of adults who consumes alcohol.}}{\text{Total population under survey}} \times 100$$

The findings are presented on the table 2 .1 and figure 4

TABLE 2.1

Frequency and percentage distribution of prevalence of alcoholism among adult population in rural community.

n=150

Variables	Frequency	Percentage (%)
Do you consume alcohol?		
a. Yes	91	60.7
b. No	59	39.3

Data presented in table 2 shows that out of 150 participants, a majority i.e. 91 (60.7%) regularly consume alcohol, resulting in a prevalence rate of 60.7% for alcoholism among the 150 adults.

Further the nature of alcohol consumption was assessed through certain question. Findings are presented in terms of frequency and percentage in table 2.2.

TABLE 2.2

Frequency and percentage distribution of nature of alcohol consumptions among adult population in rural community.

n=91

Variables	Frequency	Percentage (%)
In what form do you consume alcohol?		
a. Rum	7	7.7
b. Beer	16	17.6
c. Wine	11	12.1
d. Whiskey	3	4.4
e. Local alcohol	54	59.3
Reason for consuming alcohol		
a. Stress	13	14.3
b. Peer pressure	12	13.2
c. As an act of rebellion	0	0
d. For fun	66	72.5
For how long have you been drinking?		
a. 1 year	26	28.6
b. 2 years	44	48.4
c. 3 years	10	11

d. 4 years and above	11	12
At what age you started drinking?		
a. Below 18 years	27	29.7
b. 19-30 years	59	64.8
c. 31-40 years	3	3.3
d. 41 and above	2	2.2
How many days in a week you consume alcohol?		
a. 1 day	51	56
b. 2-3 days	38	41.8
c. 4-5 days	1	1.1
d. 6-7 days	1	1.1
How many times in a day you drink alcohol?		
a. 1 time	70	76.9
b. 2-3 times	19	20.9
c. 4-5 times	2	2.2
d. 6 times and above	0	0
How much alcohol do you consume in a day?		
a. 1 glass	53	58.2
b. 2 glasses	33	36.3
c. 3 glasses	3	3.3
d. 4 glass and above	2	2.2
How frequently in the past year you found yourself needing an alcoholic beverage in the morning to start your day?		
a. Less than monthly	63	69.2
b. Monthly	5	5.5
c. Weekly	4	4.4
d. Daily	19	20.9
Have you or somebody else been injured as a result of you drinking ?		
a. Yes	7	7.7
b. No	84	92.3

Data presented in table 2.2 shows that out of 91 adults 54 (59.3%) consumes alcohol regularly predominantly in the form of local alcohol, 13 (14.3%) for reasons such as stress relief and 66 (72.5%) for fun. Among drinkers, the majority 44 (48.4%) have been consuming for 2 years, with 59 (64.8%) starting between the ages of 19-30, 38 (41.8%) typically drinking 2-3 days a week and 70 (76.9%) consuming once a day with a majority i.e. 53 (58.2%) consuming one glass per day. Notably, 19 (20.9%) reported needing alcohol in the morning daily. However, only 7 (7.7%) reported injuries due to drinking.

Section III: Related health problems of alcoholism among the adult population in rural community.

This section deals with the assessment of occurrence of related health problems of alcoholism among adult population. The occurrence of related health problems of alcoholism among adult population was assessed through structured interview schedule. The overall prevalence of related health problems of alcoholism among adult population was computed in terms of frequency and percentage.

The findings are presented on the table 3 and figure 5.

TABLE 3

Frequency and percentage distribution of related health problems of alcoholism among the adult population in rural community.

n=91

S. NO	Health problems	Yes		No	
		f	%	F	%
1	Are you a diagnosed case of diabetes?	21	23.1	70	76.9
2	Do you have a history of peptic ulcer?	17	18.7	74	81.3
3	Are you a diagnosed case of high blood pressure?	27	29.7	64	70.3
4	Are you a diagnosed case of liver disease?	1	1.1	90	98.9
5	Do you experience muscle weakness or cramping?	9	9.9	82	90.1
6	Do you get irritable or frustrated very often?	10	11	81	89
7	Has drinking interfere with your responsibility at work or home?	6	6.6	85	93.4

8	Do have any difficulty in sleeping without alcohol?	8	8.8	83	91.2
9	Do you experience leisure or craving for alcohol which disturb your daily activity?	0	0	91	100
10	Do you experience tremors?	4	4.4	87	95.6

Data presented in table 3 shows that out of 91 samples 21 (23.1%) of the adult population who consumes alcohol have diabetes, 17 (18.7%) have a history of peptic ulcers, and 27 (29.7%) are a diagnosed case of high blood pressure, 1 (1.1 %) are diagnosed case of liver disease, 9 (9.9%) experienced muscle weakness or cramping, 10 (11%) get irritable or frustrated very often, and 6 (6.6%) has admitted that drinking had interfered with their responsibility at work or home, 8 (8.8%) have difficulty in sleeping without alcohol, 91 (100%) has not experienced leisure or craving for alcohol which disturb their daily activity, and 4 (4.4%) experience tremors.

Section IV: Association between Prevalence of Alcoholism among the adult population in rural community with demographic variables.

This section deals with the findings on the association between prevalence of alcoholism among adult population with selected demographic variables.

The null hypothesis H_{01} was formulated to test the research hypothesis H_1.

H_{01}: There is no significant association between prevalence of alcoholism among adult population with selected socio demographic variables at 0.05 level of significance.

Chi square test was computed to determine the significant association between prevalence of alcoholism among adult population with selected socio demographic variables.

The findings are shown on the table 4.

TABLE 4

Association between prevalence of alcoholism among the adult population in rural community with demographic variables

n=150

Demographic variables	prevalence of alcoholism		χ^2 value	df	p value	Tabulated value	Inference
	Yes	No					
Age in years							
20-29	22	20					
30-39	24	11					
40-49	28	8	11.77	4	0.019	9.49	*S
50-59	15	14					
60 and above	2	6					
Gender							
Male	73	2	84.51	1	0.001	3.84	*S
Female	18	57					
Marital status							
Married	48	21					
Unmarried	32	23					
Separated	1	1	7.646	4	0.105	9.49	NS
Divorced	1	0					
Widowed	9	14					
Monthly family income							
≥ 20,482	8	2					
10,241 - 20,481	12	0					
7,681 - 10,240	11	1					
5,120 – 7,680	3	0					
3,072 – 5,119	2	1	21.75	6	0.001	12.59	*S
1,034 – 3,071	27	24					
≤ 1,303	28	31					
Religion							
Hinduism	70	45					
Islam	13	11	1.097	2	0.578	5.99	NS
Christianity	0	0					

Others	8	3					
Type of family							
Nuclear	2	2	0.196	1	0.658	3.84	NS
Joint	89	57					
Educational status							
No formal education	0	0					
Primary school	10	12					
Middle school	9	11	7.656	4	0.105	9.49	NS
High school	28	10					
Higher secondary	40	22					
Graduate	4	4					

NS-Non significant *S- Significant

Overall statistical findings of data presented on table 4 shows that there is significant association between prevalence of alcoholism among adult population with age (χ^2 11.77 and p 0.019), gender (χ^2 84.51 and p 0.001) and monthly family income (χ^2 21.75 and p 0.001) and there is no significant association between prevalence of alcoholism among adult population with marital status, religion, type of family and educational status. Hence, the null hypothesis H_{01} is rejected and research hypothesis H_1 is accepted in demographic variables such as age, gender and monthly family income. The null hypothesis H_{01} is retained for the demographic variables such as marital status, religion, type of family and educational status.

Section V: Association between related health problems of alcoholism among the adult population in rural community with demographic variable.

This section deals with the findings on the association between related health problems such as diabetes, peptic ulcer, high blood pressure, muscle weakness/cramping, irritability, disturbed daily activity, anxiety, disturbed sleep, tremors of alcoholism among adult population with selected demographic variables.

The null hypothesis H_{02} was formulated to test the research hypothesis H_2.

H_{02}: There is no significant association between related health problems of alcoholism among adult population with selected socio demographic variables at 0.05 level of significance.

Chi square test was computed to determine the significant association between related health problems of alcoholism among adult population with selected socio demographic variables.

The findings are shown on the table 5.1 to table 5.10.

TABLE 5.1

Association between related health problems (diabetes) of alcoholism among the adult population in rural community with demographic variables.

n=91

Demographic variables	Diabetes		χ^2 value	df	p value	Tabulated value	Inference
	Yes	No					
Age in years							
20-29	5	17					
30-39	4	20					
40-49	7	21	2.104	4	0.717	9.49	NS
50-59	5	10					
60 and above	0	2					
Gender							
Male	12	61	9.162	1	0.002	3.84	*S
Female	9	9					
Marital status							
Married	10	38					
Unmarried	5	27					
Separated	0	1	11.37	4	0.023	9.49	*S
Divorced	0	1					
Widowed	6	3					
Monthly family income							
≥ 20,482	0	8					
10,241 - 20,481	7	5					
7,681 - 10,240	2	9	12.82	6	0.046	12.59	*S
5,120 – 7,680	0	3					
3,072 – 5,119	0	2					
1,034 – 3,071	5	22					
≤ 1,303	7	21					
Religion							
Hinduism	20	50					
Islam	1	12	5.324	2	0.070	5.99	NS
Christianity	0	0					
Others	0	8					

Type of family							
Nuclear	0	2	0.613	1	0.433	3.84	NS
Joint	21	68					
Educational status							
No formal education	0	0					
Primary school	5	5					
Middle school	3	6	6.057	4	0.195	9.49	NS
High school	4	23					
Higher secondary	8	32					
Graduate	1	3					

NS-Non significant *S- Significant

Overall statistical findings of data presented on table 5.1 shows that there is significant association between related health problems (diabetes) of alcoholism among adult population with gender (χ^2 9.162 and p 0.002), marital status (χ^2 11.37 and p 0.023) and monthly family income (χ^2 12.82 and p 0.046) and there is no significant association between related health problems (diabetes) of alcoholism mong adult population with age, religion, type of family and educational status . Hence, the null hypothesis H_{02} is rejected and research hypothesis H_2 is accepted in demographic variables such as gender, marital status and monthly family income. The null hypothesis H_{02} is retained for the demographic variables such as age, religion, type of family and educational status.

TABLE 5.2

Association between related health problems (peptic ulcer) of alcoholism among the adult population in rural community with demographic variables.

n=91

Demographic variables	**Peptic ulcer**		**χ^2 value**	**df**	**p value**	**Tabulated value**	**Inference**
	Yes	**No**					
Age in years							
20-29	1	21					
30-39	5	19					
40-49	8	20	5.246	4	0.263	9.49	NS
50-59	3	12					
60 and above	0	2					
Gender							
Male	8	65	14.48	1	0.001	3.84	*S
Female	9	9					

Marital status							
Married	6	42					
Unmarried	6	26	9.722	4	0.045	9.49	*S
Separated	0	1					
Divorced	0	1					
Widowed	5	4					
Monthly family income							
≥ 20,482	1	7					
10,241 - 20,481	2	10					
7,681 - 10,240	1	10	7.238	6	0.299	12.59	NS
5,120 – 7,680	0	3					
3,072 – 5,119	1	1					
1,034 – 3,071	3	24					
≤ 1,303	9	19					
Religion							
Hinduism	16	54					
Islam	1	12	3.675	2	0.159	5.99	NS
Christianity	0	0					
Others	0	8					
Type of family							
Nuclear	1	1	1.320	1	0.251	3.84	NS
Joint	16	73					
Educational status							
No formal education	0	0					
Primary school	6	4					
Middle school	3	6	17.55	4	0.002	9.49	*S
High school	5	23					
Higher secondary	2	38					
Graduate	1	3					

NS-Non significant *S- Significant

Overall statistical findings of data presented on table 5.2 shows that there is significant association between related health problems (peptic ulcer) of alcoholism among adult population with gender (χ^2 14.48 and p 0.001), marital status (χ^2 9.722 and p 0.045) and educational status (χ^2 17.55 and p 0.002) and there is no significant association between related health problems (peptic ulcer) of alcoholism mong adult population with age, monthly family income, religion and type of family. Hence, the null hypothesis H_{02} is rejected and

research hypothesis H_2 is accepted in demographic variables such as gender, marital status and educational status. The null hypothesis H_{02} is retained for the demographic variables such as age, monthly family income, religion, and type of family .

TABLE 5.3

Association between related health problems (high blood pressure) of alcoholism among the adult population in rural community with demographic variables.

n=91

Demographic variables	High blood pressure		χ^2 value	df	p value	Tabulated value	Inference
	Yes	No					
Age in years							
20-29	4	18					
30-39	10	14	4.003	4	0.406	9.49	NS
40-49	8	20					
50-59	5	20					
60 and above	0	2					
Gender							
Male	22	51	0.039	1	0.844	3.84	NS
Female	5	13					
Marital status							
Married	14	34					
Unmarried	10	22	0.946	4	0.918	9.49	NS
Separated	0	1					
Divorced	0	1					
Widowed	3	6					
Monthly family income							
≥ 20,482	1	7					
10,241 - 20,481	6	6					
7,681 - 10,240	4	7	5.603	6	0.469	12.59	NS
5,120 – 7,680	0	3					
3,072 – 5,119	1	1					
1,034 – 3,071	7	20					
≤ 1,303	8	20					
Religion							

Hinduism	23	47	1.742	2	0.419	5.99	NS
Islam	3	10					
Christianity	0	0					
Others	1	7					
Type of family							
Nuclear	1	1	0.405	1	0.525	3.84	NS
Joint	26	63					
Educational status							
No formal education	0	0					
Primary school	5	5					
Middle school	3	6	3.148	4	0.533	9.49	NS
High school	9	19					
Higher secondary	9	31					
Graduate	1	3					

NS-Non significant *S-Significant

Overall statistical findings of data presented on table 5. 3 shows that there is no significant association between related health problems (high blood pressure) of alcoholism among adult population with demographic variables such as age, gender , marital status, monthly family income, religion, type of family and educational status. Hence, the null hypothesis H_{02} is accepted and research hypothesis H_2 is rejected in all the selected demographic variables.

TABLE 5.4

Association between related health problems (liver disease) of alcoholism among the adult population in rural community with demographic variable.

n=91

Demographic variables	Liver disease		χ^2 value	df	p value	Tabulated value	Inference
	Yes	No					
Age in years							
20-29	1	21					
30-39	0	24					
40-49	0	28	3.171	4	0.530	9.49	NS
50-59	0	15					
60 and above	0	2					
Gender							
Male	1	72	0.249	1	0.618	3.84	NS
Female	0	18					
Marital status							
Married	0	48					
Unmarried	1	31					
Separated	0	1	1.864	4	0.761	9.49	NS
Divorced	0	1					
Widowed	0	9					
Monthly family income							
≥ 20,482	0	8					
10,241 - 20,481	0	12					
7,681 - 10,240	0	11	2.397	6	0.880	12.59	NS
5,120 – 7,680	0	3					
3,072 – 5,119	0	2					
1,034 – 3,071	1	26					
≤ 1,303	0	28					
Religion							
Hinduism	1	69					
Islam	0	13	0.303	2	0.859	5.99	NS
Christianity	0	0					

Others	0	8					
Type of family							
Nuclear	0	2	0.203	1	0.880	3.84	NS
Joint	1	88					
Educational status							
No formal education	0	0					
Primary school	0	10					
Middle school	0	9	21.99	4	0.001	9.49	*S
High school	0	28					
Higher secondary	0	40					
Graduate	1	3					

NS-Non significant *S-Significant

Overall statistical findings of data presented on table 5.4 shows that there is significant association between related health problem (liver disease) of alcoholism among adult population with educational status (χ^2 21.99 and p 0.001) and there is no significant association between related health problems (anxiety) of alcoholism mong adult population with age, gender, marital status, monthly family income, religion and type of family . Hence, the null hypothesis H_{02} is rejected and research hypothesis H_2 is accepted in demographic variable educational status. The null hypothesis H_{02} is retained for the demographic variables such as age, gender, marital status, monthly family income, religion, and type of family.

TABLE 5.5

Association between related health problems (muscle weakness or cramping) of alcoholism among the adult population in rural community with demographic variable.

n=91

Demographic variables	**Muscle weakness or cramping**		**χ^2 value**	**df**	**p value**	**Tabulated value**	**Inference**
	Yes	**No**					
Age in years							
20-29	0	22					
30-39	1	23	8.861	4	0.065	9.49	NS
40-49	4	24					
50-59	4	11					
60 and above	0	2					
Gender							
Male	3	70	13.83	1	0.001	3.84	*S

Female	6	12					
Marital status							
Married	4	44					
Unmarried	1	31	14.05	4	0.007	9.49	*S
Separated	0	1					
Divorced	0	1					
Widowed	4	5					
Monthly family income							
≥ 20,482	0	8					
10,241 - 20,481	1	11					
7,681 - 10,240	2	9	9.455	4	0.150	9.49	NS
5,120 – 7,680	0	3					
3,072 – 5,119	0	2					
1,034 – 3,071	0	27					
≤ 1,303	6	22					
Religion							
Hinduism	8	62					
Islam	0	13	1.674	2	0.433	5.99	NS
Christianity	0	0					
Others	1	7					
Type of family							
Nuclear	0	2	0.224	1	0.636	3.84	NS
Joint	9	80					
Educational status							
No formal education	0	0					
Primary school	5	5					
Middle school	2	7	24.65	4	0.001	9.49	*S
High school	2	26					
Higher secondary	0	40					
Graduate	0	4					

NS-Non significant *S-Significant

Overall statistical findings of data presented on table 5.5 shows that there is significant association between related health problems (muscle weakness or cramping) of alcoholism among adult population with gender (χ^2 13.83 and p 0.001), marital status (χ^2 14.05 and p 0.007) and educational status (χ^2 24.65 and p 0.001) and there is no significant association between related health problems (muscle weakness or cramping) of alcoholism mong adult population with age, monthly family income, religion and type of family. Hence, the

null hypothesis H_{02} is rejected and research hypothesis H_2 is accepted in demographic variables such as gender, marital status and educational status. The null hypothesis H_{02} is retained for the demographic variables such as age, monthly family income, religion, and type of family.

TABLE 5.6

Association between related health problems (irritability) of alcoholism among the adult population in rural community with demographic variable.

n=91

Demographic variables	Irritability		χ^2 value	df	p value	Tabulated value	Inference
	Yes	No					
Age in years							
20-29	1	21					
30-39	2	22					
40-49	3	25	5.125	4	0.275	9.49	NS
50-59	4	11					
60 and above	0	2					
Gender							
Male	5	68	6.466	1	0.011	3.84	*S
Female	5	13					
Marital status							
Married	3	45					
Unmarried	4	28					
Separated	0	1	6.018	4	0.198	9.49	NS
Divorced	0	1					
Widowed	3	6					
Monthly family income							
≥ 20,482	1	7					
10,241 - 20,481	0	12					
7,681 - 10,240	2	9					
5,120 – 7,680	0	3	4.404	6	0.622	12.59	NS
3,072 – 5,119	0	2					
1,034 – 3,071	2	25					
≤ 1,303	5	23					

Religion							
Hinduism	9	61	1.873	2	0.392	5.99	NS
Islam	0	13					
Christianity	0	0					
Others	1	7					
Type of family							
Nuclear	1	1	3.182	1	0.074	3.84	NS
Joint	9	80					
Educational status							
No formal education	4	6	11.29	4	0.023	9.49	*S
Primary school	1	8					
Middle school	2	26					
High school	2	38					
Higher secondary	1	3					
Graduate	0	0					

NS-Non significant *S-Significant

Overall statistical findings of data presented on table 5.5 shows that there is significant association between related health problems (irritability) of alcoholism among adult population with gender (χ^2 6.466 and p 0.011) and educational status (χ^2 11.29 and p 0.023) and there is no significant association between related health problems (irritability) of alcoholism mong adult population with age, marital status, monthly family income, religion and type of family. Hence, the null hypothesis H_{02} is rejected and research hypothesis H_2 is accepted in demographic variables such as gender and educational status. The null hypothesis H_{02} is retained for the demographic variables such as age, marital status, monthly family income, religion, and type of family .

TABLE 5.7

Association between related health problems (disturbed daily activity) of alcoholism among the adult population in rural community with demographic variable.

n=91

Demographic variables	**Disturbed daily activity**		**χ^2 value**	**df**	**p value**	**Tabulated value**	**Inference**
	Yes	**No**					
Age in years							
20-29	0	22	2.932	4	0.569	9.49	NS
30-39	2	22					
40-49	2	26					

50-59	2	13					
60 and above	0	2					
Gender							
Male	3	70	3.697	1	0.055	3.84	NS
Female	3	15					
Marital status							
Married	1	47					
Unmarried	3	29					
Separated	0	1	5.698	4	0.223	9.49	NS
Divorced	0	1					
Widowed	2	7					
Monthly family income							
≥ 20,482	1	7					
10,241 - 20,481	0	12					
7,681 - 10,240	1	10	2.903	6	0.821	12.59	NS
5,120 – 7,680	0	3					
3,072 – 5,119	0	2					
1,034 – 3,071	1	26					
≤ 1,303	3	25					
Religion							
Hinduism	6	64					
Islam	0	13	1.927	2	0.382	5.99	NS
Christianity	0	0					
Others	0	8					
Type of family							
Nuclear	1	1	6.256	1	0.012	3.84	*S
Joint	5	84					
Educational status							
No formal education	0	0					
Primary school	2	8					
Middle school	1	8	6.921	4	0.140	9.49	NS
High school	1	27					
Higher secondary	1	39					
Graduate	1	3					

NS-Non significant *S-Significant

Overall statistical findings of data presented on table 5.7 shows that there is significant association between related health problems (disturbed daily activity) of alcoholism among adult population with type of family (χ^2 6.256 and p 0.012) and there is no significant association between related health problems (disturbed daily activity) of alcoholism mong adult population with age, gender, marital status, monthly family income, religion and educational status. Hence, the null hypothesis H_{02} is rejected and research hypothesis H_2 is accepted in demographic variable i.e. type of family. The null hypothesis H_{02} is retained for the demographic variables such as age, gender, marital status, monthly family income, religion, and educational status .

TABLE 5.8

Association between related health problems (difficulty in sleeping) of alcoholism among the adult population in rural community with demographic variable.

n=91

Demographic variables	Disturbed sleep		χ^2 value	df	p value	Tabulated value	Inference
	Yes	No					
Age in years							
20-29	2	20					
30-39	3	21	1.944	4	0.746	9.49	NS
40-49	1	27					
50-59	2	13					
60 and above	0	2					
Gender							
Male	6	67	0.151	1	0.698	3.84	NS
Female	2	16					
Marital status							
Married	4	44					
Unmarried	3	29					
Separated	0	1	0.279	4	0.991	9.49	NS
Divorced	0	1					
Widowed	1	8					
Monthly family income							
≥ 20,482	0	8					
10,241 - 20,481	0	12	12.27	6	0.056	12.59	
7,681 - 10,240	3	8					NS
5,120 – 7,680	0	3					

3,072 – 5,119	1	1					
1,034 – 3,071	3	24					
≤ 1,303	1	27					
Religion							
Hinduism	6	64					
Islam	1	12	0.161	2	0.923	5.99	NS
Christianity	0	0					
Others	1	7					
Type of family							
Nuclear	0	2	0.197	1	0.657	3.84	NS
Joint	8	81					
Educational status							
No formal education	0	0					
Primary school	1	9					
Middle school	1	8	2.235	4	0.693	9.49	NS
High school	4	24					
Higher secondary	2	38					
Graduate	0	4					

NS-Non significant *S-Significant

Overall statistical findings of data presented on table 5.8 shows that there is no significant association between related health problems (disturbed sleep) of alcoholism among adult population with age, gender, marital status, monthly family income, religion, type of family and educational status. Hence, the null hypothesis H_{02} is accepted and research hypothesis H_2 is rejected in all the selected demographic variables .

TABLE 5.9

Association between related health problems (craving for alcohol) of alcoholism among the adult population in rural community with demographic variable.

n=91

Demographic variables	Craving for alcohol		χ^2 value	df	p value	Tabulated value	Inference
	Yes	No					
Age in years							
20-29	0	22					
30-39	0	24	NA	NA	NA	-	-
40-49	0	28					
50-59	0	15					
60 and above	0	2					
Gender							
Male	0	73	NA	NA	NA	-	-
Female	0	18					
Marital status							
Married	0	48					
Unmarried	0	32	NA	NA	NA	-	-
Separated	0	1					
Divorced	0	1					
Widowed	0	9					
Monthly family income							
≥ 20,482	0	8					
10,241 - 20,481	0	12					
7,681 - 10,240	0	11	NA	NA	NA	-	-
5,120 – 7,680	0	3					
3,072 – 5,119	0	2					
1,034 – 3,071	0	27					
≤ 1,303	0	28					
Religion							
Hinduism	0	70					
Islam	0	13	NA	NA	NA	-	-

Christianity	0	0					
Others	0	8					
Type of family							
Nuclear	0	2	NA	NA	NA	-	-
Joint	0	89					
Educational status							
No formal education	0	0					
Primary school	0	10					
Middle school	0	9	NA	NA	NA	-	-
High school	0	28					
Higher secondary	0	40					
Graduate	0	4					

NA-Not applicable

Data presented on table 5.9 shows that, based on the provided data, there are no reported cases of individuals craving alcohol within the demographic groups. This results in an inability to perform a chi-square test for these variables since chi-square analysis requires at least some observed cases in each category.

TABLE 5.10

Association between related health problems (tremors) of alcoholism among the adult population in rural community with demographic variable.

n=91

Demographic variables	**Tremors**		**χ^2 value**	**df**	**p value**	**Tabulated value**	**Inference**
	Yes	**No**					
Age in years							
20-29	1	21					
30-39	2	22	2.450	4	0.654	9.49	NS
40-49	0	28					
50-59	1	14					
60 and above	0	2					
Gender							
Male	3	70	0.072	1	0.789	3.84	NS
Female	1	17					
Marital status							
Married	2	46	1.187	4	0.880	9.49	NS
Unmarried	1	31					
Separated	0	1					

Divorced	0	1					
Widowed	1	8					
Monthly family income							
≥ 20,482	0	8					
10,241 - 20,481	0	12					
7,681 - 10,240	1	10	11.60	6	0.071	12.59	NS
5,120 – 7,680	0	3					
3,072 – 5,119	1	1					
1,034 – 3,071	1	26					
≤ 1,303	1	27					
Religion							
Hinduism	3	67					
Islam	1	12	0.706	2	0.703	5.99	NS
Christianity	0	0					
Others	0	8					
Type of family							
Nuclear	0	2	0.094	1	0.759	3.84	NS
Joint	4	85					
Educational status							
No formal education	0	0					
Primary school	1	9					
Middle school	0	9	7.544	4	0.110	9.49	NS
High school	1	26					
Higher secondary	0	40					
Graduate	1	3					

NS-Non significant *S-Significant

Overall statistical findings of data presented on table 5.10 shows that there is no significant association between related health problems (tremors) of alcoholism among adult population with demographic variables such as age, gender, marital status, monthly family income, religion, type of family and educational status. Hence, the null hypothesis H_{02} is accepted and research hypothesis H_2 is rejected in all the selected demographic variables.

Major findings of the study

Major findings of the study were summarized as below-

Finding on demographic variables

- Out of 150 samples majority of the adult population i.e., 42 (28%) belongs to age group of 19-29 years; 75 (50%) are male and 75 (50%) are female; 69 (46%) of adult population were married;59 (39.3%) earn ≤ 1,303; 115 (76.7%) of the adult population practice Hinduism; 146 (97.3%) live in a joint family and 62 (41.4%) completed higher secondary education.

Findings related to prevalence of alcoholism

Out of 150 samples (91) 60.7% of participants consume alcohol, predominantly in the form of local alcohol (54) 59.3% for reasons such as stress relief (13)14.3% and for fun (66) 72.5%. Among drinkers, the majority (44) 48.4% have been doing so for 2 years, with most starting between the ages of 19-30 (59) 64.8%. They typically drink 2-3 days a week (38) 41.8% and once a day (70) 76.9%, with a majority consuming one glass per day (53) 58.2%. Notably, (19) 20.9% reported needing alcohol in the morning daily. However, only (7) 7.7% reported injuries due to drinking.

Findings on related health problems of alcoholism"

Out of 150 samples 21 (23.1%) of the adult population who consumes alcohol have diabetes, 17 (18.7%) have peptic ulcers, and 27 (29.7%) have high blood pressure, Fewer participants, 1 (1.1%), were diagnosed case of liver disease,9 (9.9%) experience muscle weakness or cramping, 10 (11%) get irritable or frustrated very often, and 6 (6.6%) has admitted that drinking had interfered with their responsibility at work or home., and 8 (8.8%) have difficulty in sleeping without alcohol, 91 (100%) experienced leisure or craving for alcohol which disturb their daily activity, and 4 (4.4%) experience tremors.

Findings related to association between prevalence of alcoholism with selected demographic variables

In this study, significant association was found between prevalence of alcoholism among adult population with demographic variables such as age (χ^2 11.77 and p 0.019), gender (χ^2 84.51 and p 0.001) and monthly family income (χ^2 21.75 and p 0.001). Hence, the null hypothesis H_{01} is rejected and research hypothesis H_1 is accepted in demographic variables such as age, gender and monthly family income.

Findings related to association between related health problems of alcoholism with selected demographic variables

- There is significant association between related health problems **(diabetes)** of alcoholism among adult population with demographic variables such as gender (χ^2 9.162 and p 0.002), marital status (χ^2 11.37 and p 0.023) and monthly family income (χ^2 12.82 and p 0.046).

- There is significant association between related health problems **(peptic ulcer)** of alcoholism among adult population with demographic variables such as gender (χ^2 14.48 and p 0.001), marital status (χ^2 9.722 and p 0.045) and educational status (χ^2 17.55 and p 0.002).
- There is no significant association between related health problems **(high blood pressure)** of alcoholism among adult population with demographic variables such as age, gender, marital status, monthly family income, religion, type of family and educational status.
- There is significant association between related health problem **(liver disease)** of alcoholism among adult population with demographic variable educational status (χ^2 21.99 and p 0.001).
- There is significant association between related health problems **(muscle weakness or cramping)** of alcoholism among adult population with demographic variables such as gender (χ^2 13.83 and p 0.001), marital status (χ^2 14.05 and p 0.007) and educational status (χ^2 24.65 and p 0.001).
- There is significant association between related health problems **(irritability)** of alcoholism among adult population with demographic variables such as gender (χ^2 6.466 and p 0.011) and educational status (χ^2 11.29 and p 0.023).
- There is significant association between related health problems **(disturbed daily activity)** of alcoholism among adult population with "demographic variable such type of family" (χ^2 6.256 and p 0.012).
- There is no significant association between related health problems **(disturbed sleep)** of alcoholism among adult population with demographic variables such as age, gender, marital status, monthly family income, religion, type of family and educational status.
- There is no significant association between related health problems **(tremors)** of alcoholism among adult population with demographic variables such as age, gender, marital status, monthly family income, religion, type of family and educational status.

Interpretation of findings

The study revealed that alcohol consumption is prevalent in the rural community, with 60.7% of participants engaging in drinking, primarily for recreational purposes. Most began drinking in their twenties, with a significant number consuming alcohol frequently, indicating potential dependency, as shown by the 20.9% who needed alcohol in the morning. Health issues such as diabetes, peptic ulcers, and high blood pressure were common among drinkers, and all participants reported cravings that disrupted daily activities. Significant associations were found between alcoholism and demographic factors like age, gender, and income, while health problems such as diabetes and peptic ulcers were linked to gender, marital status, and education level. However, no significant associations were found between alcoholism prevalence and other demographic variables like marital status, religion, type of family, or educational status.

Conclusion

Alcoholism, or alcohol use disorder, occurs when a person becomes dependent on alcohol, and it remains a growing concern in countries like India due to a combination of socio-cultural practices, varying state alcohol policies, and urbanization, which has led to a rise in social drinking. Media portrayals often mislead the public, and awareness of alcohol-related problems remains limited, further complicating efforts to reduce consumption. This study, conducted in Kamrup (M), Assam, found that 60.7% of participants consumed alcohol, demonstrating the widespread nature of the issue in the rural community. Addressing this problem requires stricter alcohol policies across all states, public education on the health risks associated with alcohol, and promoting healthy alternatives to drinking. Regulating alcohol advertising, particularly towards younger audiences, and fostering alcohol-free activities in communities can also contribute to reducing consumption and reshaping social norms around drinking. These combined efforts are critical in curbing alcohol use and its associated health problems.

Nursing implication

The findings of the study have several implications in nursing in the relevant areas like nursing practice, nursing education, nursing administration and nursing research.

Nursing Practice

In nursing practice, incorporating routine alcohol screening and assessment, particularly in primary care and community health settings, is essential for the early identification of individuals at risk for alcoholism and related health issues. Nurses must be trained to provide culturally sensitive care, recognizing the unique social and cultural dynamics of rural communities that may influence alcohol consumption. A holistic approach is necessary for addressing alcohol-related health problems, involving not only the physical aspects of care but also psychological and social support. Nurses can collaborate with social workers, counsellors, and community leaders to provide comprehensive care, ensuring all aspects of the individual's well-being are addressed.

Nursing Education

Nursing education programs should incorporate comprehensive content on substance abuse, particularly focusing on alcoholism, its health implications, and management strategies, to prepare future nurses to effectively address alcohol-related issues in various healthcare settings. Continuous professional development programs are essential for enhancing practicing nurses' skills in alcohol dependency management, including motivational interviewing, counselling techniques, and the use of screening tools like the CAGE questionnaire. Additionally, nursing education should emphasize community health nursing, equipping students with the knowledge and skills needed to address public health issues, such as alcoholism, particularly in rural settings.

Nursing Administration

Nurse administrators should advocate for and develop policies within healthcare institutions that prioritize the screening, prevention, and treatment of alcoholism, including creating protocols for managing alcohol-related

health problems and ensuring adequate resource allocation for these initiatives. They should also promote an environment of interdisciplinary collaboration between nursing staff and other healthcare professionals, such as mental health specialists, social workers, and public health experts, to provide comprehensive care for individuals with alcohol-related issues. Additionally, administrators can implement workplace wellness programs focused on substance abuse prevention and support for healthcare staff, recognizing the potential for alcohol-related issues within the healthcare workforce.

Nursing Research

Nursing research should focus on conducting epidemiological studies to gather data on the prevalence, risk factors, and health outcomes of alcoholism, which can inform public health strategies and nursing interventions. Nurses can also engage in intervention research to evaluate the effectiveness of various strategies, such as educational programs, community-based interventions, and policy changes, in reducing alcohol consumption and managing related health problems in rural settings. Additionally, research on patient outcomes can help assess the long-term health effects of nursing care for alcohol-related issues, contributing to evidence-based practices and improving patient care standards.

Recommendations

On the basis of findings of the study the following recommendations have been made:

- Increase the sample size and ensure diversity within the sample to enhance the generalizability of the findings. This could include a broader representation of different age groups, genders, and socioeconomic backgrounds.
- A comparative study can be conducted among rural and urban areas to assess the prevalence of alcohol consumption and its related health problems.
- Investigate local factors contributing to alcohol abuse, such as cultural norms, economic conditions, and availability of alcohol. Understanding these contextual factors will help tailor interventions to the community's specific needs.
- Assess the effectiveness of current community and health interventions related to alcohol use. This includes evaluating existing support programs, educational campaigns, and policy measures to identify gaps and areas for improvement.

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