A CROSS-SECTIONAL STUDY ON TOBACCO CONSUMPTION PATTERN AMONG AUTO RICKSHAW DRIVERS IN JAIPUR CITY, RAJASTHAN

A dissertation submitted in partial fulfilment of the requirements for the award of

Post-Graduate Diploma in Health and Hospital Management

by

Dr. Sudhir Rewar

PG/11/099

International Institute of Health Management Research

New Delhi -110075

April , 2013

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ISO 9001:2008 Certified Institution

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TO WHOM IT MAY CONCERN.

This is to certify that Dr.Sudhir Rewar, a student of PGDHHM course from IIHMR-Delhi has successfully completed his internship as management trainee from 15 April to 30 June 2013 at SIHFW-Rajasthan.

During his internship he completed project work on "A Cross Sectional Study On Tobacco Consumption Pattern Among Auto Rickshaw Drivers In Jaipur City, Rajasthan " under the guidance of SIHFW team.

His work is satisfactory and his performance and conduct as a trainee was good.

We wish him good luck for his future assignments

Dr.J.P.Singhal

Director-SIHFW

Certificate from Dissertation Advisory Committee

This is to certify that **Dr. Sudhir Rewar**, a graduate student of the **Post- Graduate Diploma in Health and Hospital Management**, has worked under our guidance and supervision. He is submitting this dissertation titled "**A Cross-Sectional Study On Tobacco Consumption Pattern Among Auto Rickshaw Drivers In Jaipur City, Rajasthan**" in partial fulfillment of the requirements for the award of the **Post- Graduate Diploma in Health and Hospital Management**.

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

Faculty Mentor

Mrs. Kirti Udayai

Assistant Professor

IIHMR, New Delhi

Organizational Advisor

Dr. Mamta Chauhan

Associate Professor

SIHFW, Jaipur

Certificate of Approval

Date:

TO WHOM IT MAY CONCERN

The following dissertation titled **"A cross-sectional study on tobacco consumption pattern among auto rickshaw drivers in Jaipur city, Rajasthan"** is hereby approved as a certified study in management carried out and presented in a manner satisfactory to warrant its acceptance as a prerequisite for the award of **Post-Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation

Name Signature

Prof. I. Bhattacharya _____

Dr. R. BHALLA _____

Dr. Anandhi Raadak _____

Abstract

Tobacco use is a major preventable cause of premature death and diseases, currently leading to five million deaths worldwide which are expected to raise over eight million deaths worldwide by 2030. Globally, cigarette smoking is the dominant form of tobacco use. The prevalence of tobacco consumption is reported by the World Health Organization (WHO), which focuses on smoking not on smokeless chewing of tobacco. India is the second largest consumer of tobacco in the world. The prevalence of tobacco use among adults (15 years and above) is 35% and the prevalence of overall tobacco use is 48% among males. Some reasons of this addiction are obvious such as the influence of friends or community member or to reduce work stress. This group of the population is under constant pressure and accounts for the workforce of the country so through this study we want to assess the prevalence of tobacco consumption and the associated factors involve in its consumption.

The broad objective of study was "To assess the prevalence of tobacco consumption pattern among the auto rickshaw drivers and to study associated factors involve in tobacco use as well as associated risk factors of tobacco use in Jaipur, Rajasthan". A cross sectional, descriptive study was done on auto rickshaw drivers of Jaipur city, Rajasthan. Study was done during April- May 2013 with a sample size of 166 with 99% of confidence level and 10% confidence interval. The simple random sampling technique was used and information obtained from the questionnaire was analysed with the help of SPSS 19.

Study finding shows that Prevalence among auto rickshaw drivers for consumption of tobacco products was very high (89%). Auto rickshaw drivers were mostly used tobacco in the form of Gutkha (70%) and bidi (46%) in comparison to other products. It also shows that they use cheap tobacco products. Most of the auto rickshaw drivers start using tobacco products in age less than 18 years (85%) and associated factors for tobacco use are due to friends and their influence (78%). Awareness level among auto rickshaw driver was high (68%) but still uses tobacco products because of its addiction (85%). In the opinion of auto rickshaw drivers increase in tax may reduce it consumption and the majority of drivers (76%) think that tobacco must be banned in Rajasthan.

Acknowledgement

This study is a part of my assignment with SIHFW Rajasthan during Dissertation. I would like to register my unimaginable satisfaction in completing this task in time. In retrospection, it was not my own expertise as much as the support I received from IIHMR, SIHFW Rajasthan,. This acknowledgement provides me an opportunity to express my heartfelt gratitude to all who gave this report its current shape.

I express sincere thanks to SIHFW to give me this great opportunity to do this study on Tobacco consumption pattern among auto rickshaw drivers, which was a great learning for me. I am truly indebted to ***Dr. Mamta Chauhan, Dr. Vishal Singh*** *for their guidance and support from start till end of this study. I would also like to thank* ***Dr. Bhumika Talwar*** *and* ***Ms. Aditi Sharma*** *from SIHFW who guided me at various stages of this study. I am thankful to* ***Ms. Kirti. Udayai*** *(My Mentor) of IIHMR, Delhi for providing me technical guidance and required knowledge at every step of this study. This acknowledgement will be incomplete if I do not express my sincere thanks to all the auto rickshaw drivers who became part of the sample and took out time from their busy work schedule to talk to me and share their insightful experience.*

At last I want to thank ***Navneet Singh*** *my colleague at SIHFW for his support and Valuable comments and guidance.*

I sincerely hope that this small study may contribute in future.

Dr. Sudhir Rewar

IIHMR Delhi

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List of abbreviations

1. ARD	**Auto-Rickshaw Drivers**
2. CAD	Coronary Artery Disease
3. CI	Confidence Intervals
4. COPD	Chronic Obstructive Pulmonary Disease
5. COTPA	Cigarette And Other Tobacco Products Act
6. CVD	Cardiovascular Disease
7. GATS	Global Adult Tobacco Survey
8. GTSS	Global Tobacco Surveillance System
9. GYTS	Global Youth Tobacco Survey
10. MSRTC	Maharashtra State Road Transport Corporation
11. NCD	Non - Communicable Diseases
12. NSSO	National Sample Survey Organization
13. RTO	Rajasthan Transport Office
14. SPSS	Statistical Package For The Social Science
15. WHO	World Health Organization

TOPIC 1 - ORGANISATION PROFILE

All over the world governments have realized the importance of having skilled manpower for the delivery of health services. In India, the National Institute of Health and Family Welfare (NIHFW) was established and funded by the Ministry of Health and Family Welfare for the promotion of Health and Family Welfare programmes in the country through education, training, research, evaluation, consultancy and specialized services. It was identified as the nodal agency for coordinating trainings all over the country.

Similarly, in 1995, the Government of Rajasthan under the aegis of the World Bank sponsored India Population Project IX, took the initiative of setting up an Institute of excellence for providing comprehensive skilled trainings to health system functionaries in the state. Thus was established the State Institute of Health and Family Welfare, Rajasthan at Jaipur. Being the apex training institute of the state, SIHFW has been identified as an important centre for Human Resource Development by a variety of agencies.

In September 2000, world leaders came together at United Nations Headquarters in New York to adopt the Millennium Declaration, committing their nations to a new global partnership to reduce extreme poverty and setting out a series of time-bound targets - with a deadline of 2015 - that have become known as the Millennium Development Goals. With achievement these goals as a target, the efforts have been intensified with International Agencies providing both technical and financial assistance.

Recognizing the importance of Health in the process of economic and social development and improving the quality of life of our citizens, the Government of India launched the National Rural Health Mission to carry out necessary architectural correction in the basic health care delivery system. The Mission adopts a synergistic approach by relating health to determinants of good health viz. segments of nutrition, sanitation, hygiene and safe drinking water. The Plan of Action includes increasing public expenditure on health, reducing regional imbalance in health infrastructure, pooling resources, integration of organizational structures, optimization of health manpower, decentralization and district management of health programmes, community participation and ownership of assets, induction of management and financial personnel into district health system, and

operationalizing community health centres into functional hospitals meeting Indian Public Health Standards in each Block of the Country.

The Goal of the Mission is "to improve the availability of and access to quality health care by people, especially for those residing in rural areas, the poor, women and children".

The future action plans and strategies of an organization are developed based on the review of its growth pattern and by identifying its strengths and weaknesses. Since its origin, the Institute has seen a varying trend of growth. By a systematic review of the past performance a formal consolidated document will be created, which will pave the way for the identification of deficits and strong points and will also provide the stakeholders a tool for future planning. This will aid in the future development of SIHFW by facilitating in recognition of areas of performance and improvising upon the current scenario.

State Institute of Health and Family Welfare (SIHFW) was established in April 1995 as a registered body under the World Bank Project IPP-1X (Reg. No. 25/Jaipur/1995-96). SIHFW is an apex Level autonomous, self-financed training institute in the State. SIHFW is ISO 9001:2008 certified training institution. It is the only Institute across the country which is self-sustained. There is an HR manual in place besides a quality manual endorsed by BSCIC. The institute has a virtually paperless office and is energy efficient contributing to a safe environment in a modest manner.

Mission

- Improvement in Health care through HRD, Health Research, Consultancy, and net working aiming at enhancement in the quality of life
- Develop Human Resources for Health (HRH) through capacity building
- Organization Development (OD) through operations research

Strategies

The process of developing human resources for the health is being augmented through:

- Enhancing the capacity of the HFWTCs in Rajasthan.
- Enhancing the capacity of ANM training centres located in different districts and uses them concurrently for in-service training of health functionaries.
- Conduct training of Trainers (TOT) for different programs.
- Developing Training Program and modules on the basis of Training Need Assessment of the health staff at various levels.
- Contributing to organization development of Medical, Health and Family Welfare of the State Government through operational research.
- Providing consultancy on issues related to health

Governance

A. **Governing Board** –Governing Board is chaired by the Honourable Minister of Health and F.W. The Director, SIHFW is the Member Secretary.

B. **Executive Council** is chaired by the Principal Secretary, Medical Health and Family Welfare, Govt. of Rajasthan, with Director, SIHFW as the Member Secretary

Funding

To begin with SIHFW was fully funded by IPP-IX Project till Dec. 2001. Thereafter, UNFPA supported it between 01.01.2002 to 30.06.2003. Subsequently, the Institute has carried it through Projects, studies and consultancies on its own.

Functions

- Training
- Research
- Monitoring

- Recruitments
- Consultancy
- Documentation

Networking

SIHFW has established formal linkages with IIHMR, EPOS, NIHFW, UNFPA, UNICEF, IIPS, NIPI, Mamta, INCLEN, NIPCCD and other institutes. The Institute welcomes the collaboration of interested partners.

Scope of Work during Internship

At SIHFW, Jaipur I am placed as a Project Trainee during Internship period of two and a half months that is from April to June. This period so far has allowed me to explore research and understand different aspects of healthcare research.

Work Allocated

Data Analysis

Data Interpretation

Analysis Plan

Report Writing

Presentation of the report

Some of the projects I was involved with are:

1. A cross-sectional study of tobacco consumption pattern among auto rickshaw drivers in Jaipur city, Rajasthan.
2. KAP regarding voluntary blood donation among the students of Rajasthan university campus within the age group of 18-24 years.

The learning experience has been immense because of the opportunities given to me where I could as a trainee use my skills and at the same time be a useful resource to the Organization. During the first week I was given the opportunity to study about the organization, its achievements and interact with various staff members and understand the working of the organization.

I started working on my project titled "A cross-sectional study of tobacco consumption pattern among auto rickshaw drivers in Jaipur city, Rajasthan." after a few days. For the first 2 weeks I have done the review of literature and have prepared a proposal for my study. After my study was passed I started my Data collection from auto rickshaw drivers and started data entry simultaneously. Soon I completed my data collection, started analyses of data in SPSS version 19 and MS. Excel and prepared my final report with the help of my mentor at SIHFW and IIHMR, Delhi.

Part 2

1.0 Introduction

Tobacco use is a major preventable cause of premature death and diseases, currently leading to five million deaths worldwide which are expected to raise over eight million deaths worldwide by 2030.The vast majority of these deaths is projected to occur in developing countries. Globally, cigarette smoking is the dominant form of tobacco use. The prevalence of tobacco consumption is reported by the World Health Organization (WHO), which focuses on smoking not on smokeless chewing of tobacco. The World Health Organization states that "Much of the disease burden and premature mortality attributable to tobacco use disproportionately affect the poor" of the 1.22 billion smokers 1 billion of them live in developing or transitional economies. In 2006, more than 1 billion smokers in the world consumed about 5.7 trillion cigarettes. An additional 700 billion bidi are consumed annually in India alone. There is wide variation in smoking prevalence among both males and females from one region to another. Globally, the prevalence of smoking is higher for men (40% in 2006) than for women (nearly 9% in 2006), and males account for 80% of all smokers (nearly 1 billion). [(1)]

There has been a big shift in the health burden of the country with a change from communicable to non-communicable diseases (NCDs). Non - communicable diseases (NCD) are now recognized as a major cause of morbidity and mortality. World Health Report 2001 has indicated that non-communicable diseases accounted for nearly 60% of deaths and 46% of the global burden of diseases. 75% of the total deaths due to NCDs occur in developing countries. The rapidly growing epidemics of non-communicable diseases are clearly related to changes in lifestyles. These changes include risks that are more commonly associated with wealthy societies, such as high blood pressure and high blood cholesterol, tobacco and excessive alcohol consumption, obesity and physical inactivity. But now scenario is changes for NCD, population with lower income group also affected with these diseases. While these risks and the diseases linked to them have a high prevalence in middle and high-income countries, these are now becoming more prevalent in the developing world where they create a double burden on top of the infectious diseases that still afflict the developing countries.

In the Indian context, tobacco use implies a varied range of chewing and smoking form of tobacco available at different points reflecting the socioeconomic pattern. A study conducted in India shows that there is a prevalence of 15.7% for ever use and 5.3% for current tobacco use. Smoking appears to be the dominant form of tobacco use of both ever users and current users Among current tobacco users 87.2% were smokers compared with 6.3% who were tobacco chewers; 6.3% use both forms i.e. both smoking and tobacco chewing. Nicotine used in tobacco is highly addictive in nature .Use of tobacco within short span of waking up is an indirect indicator of nicotine dependence. More than one in five of daily tobacco users 39% use it within 30 minutes, 15% use in within half an hour to hour of waking up and remaining 25% make first use of tobacco after one hour of waking up. [(2)]

Tobacco is consumed in both smoking and smokeless forms, e.g. Bidi, Khaini, pan-masala, hookah, cigarettes, cigar, cuttha, Gul, mawa, Missouri, Chillum, etc. Tobacco is a part of social culture in Northern India, Eastern and North-Eastern part of the country. The Even tobacco use rate is higher in the Eastern part of the country Odhisha, West-Bengal, Bihar and Jharkhand) and central regions (Uttar Pradesh, Madhya Pradesh and Chhattisgarh). India is the second largest consumer of tobacco products and third largest producer of tobacco in the world. The overall contribution of tobacco industry to India's agricultural sector –it employs two-third of the country's labour force. Approximately 3.5 million people are employed in tobacco cultivation in India, representing less than 0.5% of the agricultural labour force. One in two males and one in ten females in India use tobacco in some form. (**GATS India)**[(3)]

GATS India (2009-2010) revealed that more than one-third (35%) of adults in India use tobacco in some form or the other, 8-9 lakh people in India die every year due to tobacco related disease,40% of the death of Tuberculosis is associated with smoking. A health study revealed that that the direct and indirect cost of the three major tobacco related diseases namely CAD,COPD and tuberculosis (for the year 2009-10),exceeded the total combine revenue and capital expenditure by central and state on medical, public health, water supply and sanitation. [(3)] Among them 21 percent adults use only smokeless tobacco, 9 percent only smoke and 5 percent smoke as well as use smokeless tobacco. Based on these, the estimated number of tobacco users

in India is 274.9 million, with 163.7 million users of only smokeless tobacco, 68.9 million only smokers, and 42.3 million users of both smoking and smokeless tobacco.

India is the second largest consumer of tobacco in the world. The prevalence of tobacco use among adults (15 years and above) is 35% and the prevalence of overall tobacco use is 48% among males. Nearly two in five (38%) adults in rural areas and one in four (25%) adults in urban areas use tobacco in some form. In Rajasthan Gupta et al reported that the prevalence of smoking or tobacco use by 51% in rural men, 5% in rural women, 39% in urban women and 19% in urban women. [4]

Harmful health effects due to use of tobacco products are shown in table – 1

1.	Heart disease	heart attacks, stroke, high blood pressure
2.	Lung disease	cancer, COPD, chronic bronchitis, emphysema
3.	Cancer	lung, oral, nasopharyngeal, esophageal, laryngeal, pancreatic, bladder, cervix, and other
4.	Pregnancy complications	including low birth weight, miscarriage
5.	Ulcer	Mouth, Gastric and duodenal ulcers
6.	Mouth problem	Leukoplakia in mouth , bone loss around the roots of tooth, tooth loss , tooth abrasion
7.	Other complication	Lower bone mass density Increased risk of hip fractures Post-operative complications

Table 1 - Systemic diseases and conditions due to tobacco consumption

Tobacco is a risk factor for 6 of the 8 leading causes of death. Nearly 8- 9 lakhs people die every year in India due to diseases related to tobacco use. Almost 30% of cancers in India are related to tobacco use. The majority of the heart diseases and lung disorders including tuberculosis are directly attributable to tobacco consumption. Other diseases which are associated with tobacco consumption are stroke, cataract peripheral vascular diseases etc. as per available evidence,

incidence of impotence is 85% higher among smokers. Tobacco use by pregnant women leads to low birth weight babies, stillbirth and birth defects. (5)

Subsequent prospective studies showed a strong association between smoking and deaths from cancers of various sites, respiratory diseases, and vascular diseases, particularly heart attacks. Also, thousands of scientific investigations have confirmed the association of smoking with various diseases and have provided additional evidence implicating cigarette smoking as a cause of coronary artery disease, stroke, obstructive airway disease, peripheral vascular disease, pregnancy complications including intrauterine growth retardation and variety of neoplasm's including cancers of the oral cavity, larynx, oesophagus, urinary bladder, kidney, stomach, pancreas and cervix. (5)

Oral cancer may occur on the lips or anywhere within the mouth (e.g. Tongue, floor of the mouth, buccal mucosa, hard palate, soft palate). The incidence is nearly 11% in males and 5% in females.[4] Factors that influence the development of oral cancer includes tobacco use (gutkha, tobacco chewing, cigar, cigarette, and pipe snuff), excessive alcohol intake and poor dental care. Individuals who smoke have 7 to 10 times higher risk of developing oral cancer than non-smokers. Auto rickshaw drivers are a group of worker which are mainly used these type of tobacco product due to several reasons. Possible reasons for tobacco use among commercial drivers are shown in figure –1

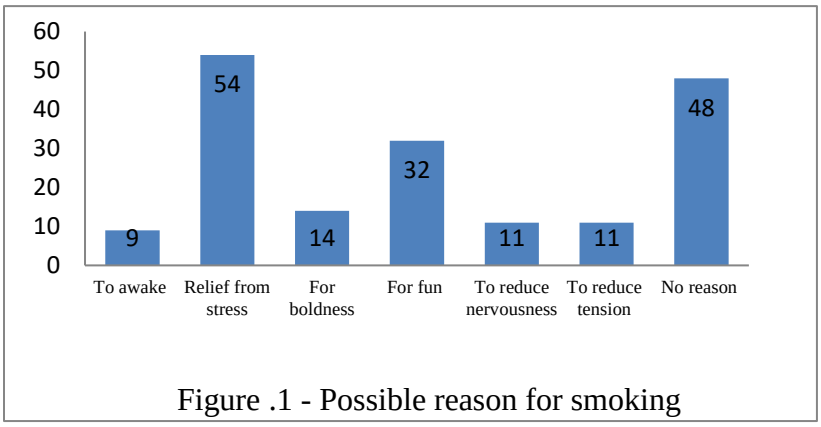


Figure .1 - Possible reason for smoking

Source –effect on warning label on cigarette use among commercial drivers in Nigeria. (6)

A medical report covering 597 drivers and conductors of MSRTC's Pune division shows that the addiction of chewing tobacco and gutkha is very common among them. Nearly 50% are addicted are to these harmful substances. Habits/addiction among auto rickshaw drivers to use different form of tobacco product is shown in figure- 2.

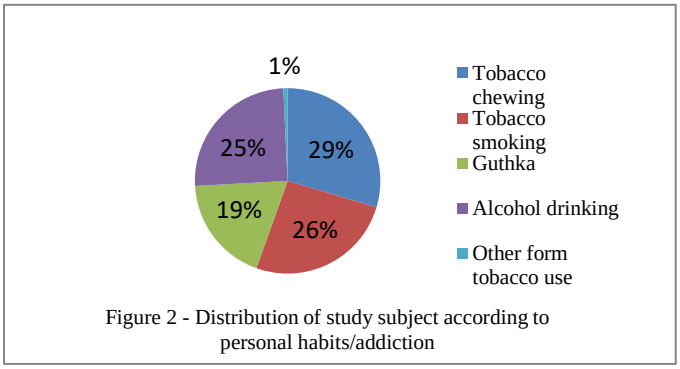


Figure 2 - Distribution of study subject according to personal habits/addiction

Source - prevalence of CVD risk factors among auto rickshaw drivers. [7]

A study was conducted on the epidemiologic and clinical aspects of oral cancer in India, where the disease ranks number one among all cancers in male patients (figure 3). A causal association between oral cancer and the chewing of betel quids containing tobacco leaves or stem and other tobacco habits has been studied and results showed more effort is needed in the prevention and control of oral cancer. [8] In the Indian subcontinent the cancers of gingival and buccal mucosa are common due to placement of tobacco quid in the oral cavity. [9

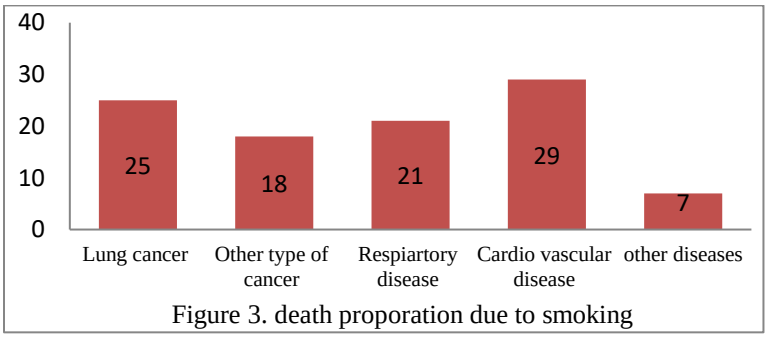


Figure 3. death proporation due to smoking

Source - An overview of oral cancer in the Indian subcontinent and recommendations to decrease its incidence. [8]

Surveys have revealed that most of the auto drivers, rickshaw-pullers, vendors, and construction workers will be chewing some form of tobacco and most of them are unwilling to give up the habit. [10]

Efforts from government side to reduce the consumption of tobacco product in India - The Indian Parliament has recently passed an act –(COTPA)2003,'Cigarette and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply, and Distribution Act)',to prohibit the consumption of cigarettes and other products that are harmful for health, in a view to achieve improvement in general public health, and also to prohibit the advertisement of ,and provide for regulation of trade, commerce, production ,supply, and distribution of cigarettes and other tobacco products in the country. Various provisions of this act have been enforced since 1st May 2004.The key features of COTPA are as follows:

(i) Ban on smoking in public places including indoor workplaces.
(ii) Ban on direct and indirect advertisement of tobacco products.
(iii) Ban on sale of tobacco products to minors (less than 18 years of age).
(iv) Ban on sale of tobacco products within 100 yards radius of educational institution.
(v) Display of all mandatory health warnings on all tobacco product packages.
(vi) Testing of tobacco products for tar and nicotine.

The Smoke-free Rules were revised in October, 2008, redefining "public places" so as to include all Workplaces and authorizing personnel responsible for enforcement of law for maintaining smoke free public places across the country.

In last three years government of India as well as government of Rajasthan has increase of taxes on tobacco product which can also reduce the sale of tobacco product.

2.0 Rationale of the Study

"Tobacco use is a serious public health challenge in several regions of the world."

Each year a great amount of money are being wasted in smoking, although it is quite obvious that smoking habit is dangerous and injurious to heath but still a large number of people especially teenagers, lower income group worker & transport worker are attracting and getting involved in smoking habit day by day. Some reasons of this addiction are obvious such as influence of friends or community member or to reduce work stress.

This study done to assess the prevalence of tobacco consumption and the associated factors involve in its consumption. As this group of the population is under constant pressure and account for the workforce of the country. So through this study we could be able to know

- The reasons of consumption
- Amount of consumption
- Awareness of ill effect of tobacco consumption
- Out of Pocket expenditure

This study will provide adequate data on the tobacco consumption pattern of auto rickshaw drivers which will guide policy makers for future planning on this issue.

3.0 Problem statement – "To assess the prevalence of tobacco consumption pattern among the auto rickshaw drivers and to study associated factors involve in tobacco use as well as associated risk factors of tobacco use in Jaipur, Rajasthan".

4.0 Review of Literature

The literature review involves identification and analysis of relevant publication that contain information pertaining to research problem. It helps to discover what is already known about the problem.

Studies related to habit, prevalence and harmful effect of smoking among auto rickshaw driver are following:-

Rahaman M et al.

The present study was conducted to assess the prevalence of cigarette and bidi smoking among rickshaw pullers in Dhaka city. A total of one thousand, rickshaw pullers were randomly chosen and questionnaire was given. The result showed overall prevalence of smoking was 75.9%. The study concluded that the prevalence of smoking among rickshaw pullers is very high compared to that of the general population. Immediate intervention programmes to be carried to reduce smoking related morbidity like cancers among rickshaw pullers. [11]

Per Gustavsson et al.

A study carried in 1996, the objective of the case-referent study was to investigate the incidence of myocardial infarction among male professional drivers in middle Sweden. The study comprised all men aged 30-74 in five counties in middle Sweden during 1976-81 or 1976-84. Incident cases of the first episode of myocardial infarction were identified from the registers of hospital admissions and causes of deaths. Referents were selected randomly from the study base. Information about occupation was obtained from the national censuses in 1970 and 1975. The possible impact of tobacco smoking and overweight were evaluated by simulations in combination with indirect data on these factors. Different types of drivers are at different risk of myocardial infarction. Bus drivers in urban areas seem to be at an increased risk, which is unlikely to be explained by uncontrolled confounding from tobacco smoking or overweight. [12]

HelleSoll-Johanning et al.

Another study carried out in 1998 with the objective of identifying Cancer incidence in urban auto drivers this is a retrospective cohort study of 18 174 bus drivers in Copenhagen in the period 1900–94. Data on employment were obtained from company files. Information on cancer was obtained from the Danish Cancer Registry. Findings showed that bus drivers or tramway employees had an increased risk of all malignant neoplasms. (13)

V.O.Lasebikan& B. Ojediran

The aim of the study was to describe the profile of problem and identification risk factors associated with the tobacco dependence among professional drivers in Nigeria. The study design utilized a multistage sampling method to interview 851 consenting subjects using the any section of the composite international diagnostic interview. Mean age of smoking initiation was 15.4yrs. Current prevalence rat of using tobacco products was 354(41.6%). Health problem were the commonest profile of problem (39.6%) associated with nicotine dependence. (14)

Ramakrishna V et al.

This case –control study was conducted to assess the cellular changes among pan masala chewers in Chennai. A total of 60 auto drivers and rickshaw pullers with the habit of pan masala chewing were compared with those of 60 controls. Results showed that cytogenetic endpoints demonstrated a statistically significant increase among pan masala chewers. The study concluded that chewing pan masala is associated with greater risk of oral cancer development. (15)

Sujatha D, Hebbar PB

A Co relational study was conducted to estimate the prevalence and correlation of oral lesions among tobacco smokers, tobacco chewers, areca- nut and alcohol users at Bangalore. A sample of 1028 patients was selected, among them 60.2% were unskilled workers which included people with occupations like drivers, cleaners etc. Interview based questionnaire was used. All the patients were examined clinically for the presence of lesions. Mucosal changes were found in 60% of the samples and 14% of them had leukoplakia. This study provided information about the

habit trends in the patients and may serve as a useful tool in educating the patients about the deleterious effects of oral tobacco, alcohol and betel exposure. (16)

S SChaudhary et al.

The study named as "Prevalence of Cardiovascular Disease risk factors among auto rickshaw Drivers in Nagpur city". This cross-sectional study was conducted from June 2007 to December 2008 at the auto-rickshaw stand of the Nagpur railway station. Out of total 6000 auto-rickshaw drivers (ARDs) of Nagpur city, 296 were studied. The study shows that 40.20% subjects had a habit of tobacco chewing; while 35.14% were smokers and 34.12% were alcohol consumers. Only 16.89% subjects were engaged in regular physical exercise. 27.36% subjects had 'moderate' or 'severe' self reported stress. 14.86% subjects were overweight and another 3.38% had obesity. 37.16% subjects had pre-hypertension; while 104 (35.14%) subjects had hypertension. So according to this study As the prevalence of various CVD risk factors is high; there is an urgent need of regular health checkups and appropriate preventive and promotive interventions among these auto-rickshaw drivers. (17)

Virendra Singh et al

The study named as "Price and consumption of tobacco "in Rajasthan shows that reduction in consumption is associated with the increased price of tobacco products. According to the GATS data, a bidi smoker in Rajasthan spends rupees 148 per month on an average on bidi purchase, which is the highest in the country. Therefore, increased tax on bidi is highly relevant for Rajasthan The Government of Rajasthan increased the tax on tobacco products from 20 to 40% after that there is Average percentage decrease in sales of cigarette, bidi, and chewing tobacco was 14.0%, 23.0%, and 38.8%, respectively in three continuous months.(18)

Dr. Prabhat Jha & Dr. Frank Chalouplea

The study named as "Tobacco control in Developing countries" is a comprehensive study that examines such key issues as poverty & smoking, rationale for government intervention & taxation, advertising & promotion bans etc. this study shows that smoking is more common among the less educated population. Prevalence of smoking among illiterate people is around 68

%. 54 in 6 year educated people and 40 % in metric pass people. Study also shows that increase in price of tobacco products also reduce its consumption. A 10 % increase in price on cigarette prices would reduce consumption around 4 % in high income countries and by 8% in lower and middle income countries. [19]

With this scenario of the health situation, it is important to study the burden of non-communicable diseases like tobacco related using Indian data to know the real dimensions of the problem and work towards preventive measures. This will help in strengthening the scientific and empirical basis of planning sound strategies to manage risk uncertainties and for consideration of ethical and other issues.

The present study is undertaken to study the prevalence of tobacco use in Auto Rickshaw Drivers. There is not even a single study has been conducted on this worker group, which also highly addicted to tobacco use in Jaipur.

5. Objectives

5.1 General objective

To assess the prevalence of tobacco consumption among auto rickshaw drivers and associated factors involve.

5.2 Specific objectives

(a) To assess the consumption of smoking and non-smoking tobacco among the auto rickshaw drivers of Jaipur & to evaluate tobacco associated health problems.

(b) To determine associated factors involve in tobacco use.

(c) To evaluate out of pocket expenditure due to use of tobacco products.

6.0 Methodology

6.1 Study Design: Cross- sectional, descriptive

6.2 Study Area : Jaipur city area

6.3 Study population: Auto Rickshaw Drivers

6.4 Sampling and Sampling Design: The present cross sectional study was conducted out in Jaipur, Rajasthan, During April - May 2013. The Auto Rickshaw Drivers, a three wheeler non-motorized vehicle, were selected as study participants.

Sample size –

Sample size = $\frac{Z^2*P*(1-P)}{C^2}$

Where, Z = Z value for confidence level (2.58 for 99% Confidence level)

P = .5 (Percentage distribution of response taken in point decimal)

C = .1 Confidence interval (10% CI taken in point decimal)

Hence, the study included 166 participants, selected through the 99 % confidence level and 10 % confidence interval out of 12400 Auto Rickshaw Drivers which are registered at RTO, Jaipur. .

Inclusion criteria:

Auto drivers –

- Both for tobacco users or not users.
- Between the age group of 18-60 years.
- Willing to participate in the study.
- Available during data collection.

6.5 Type of sampling – Simple random samplings.

6.6 Data Collection Tools and Techniques: - A questionnaire has been developed, pre-tested and modified before administering it the selected participants. Questionnaire consisted of the various items which can assess the frequency of consumption, Age of initiation, the amount of consumption, mental stress, economic factors, any past history of disease and most importantly the awareness towards oral cancer.

Participants were explained in detail regarding the purpose of the study; informed consent was obtained and questionnaires were distributed. The necessary steps were taken to maintain anonymity. Ethical clearance for the study was obtained from institutional ethical committee.

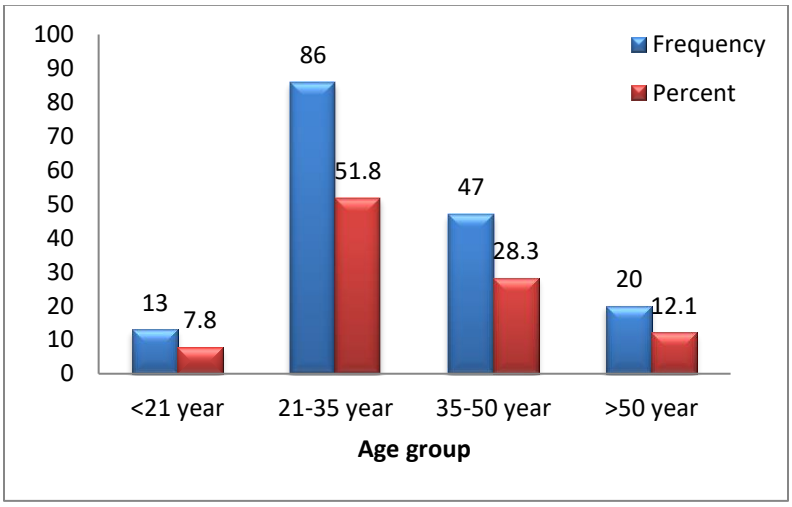
The information thus obtained from the above questionnaire was entered in the SPSS 19 version and Descriptive study is carried out to analyse results thus obtained. The information obtained was presented in terms of mean, 99% Confidence Intervals (CI) and percentages.

7.0 RESULTS:-

Table2. Distribution of study participants according to age

S.No.	Age group	Frequency	Percent
1	<21 year	13	07.8
2	21-35 year	86	51.8
3	35-50 year	47	28.3
4	>50 year	20	12.1
	Total	166	100.0

Figure4. Distribution of study participants according to age

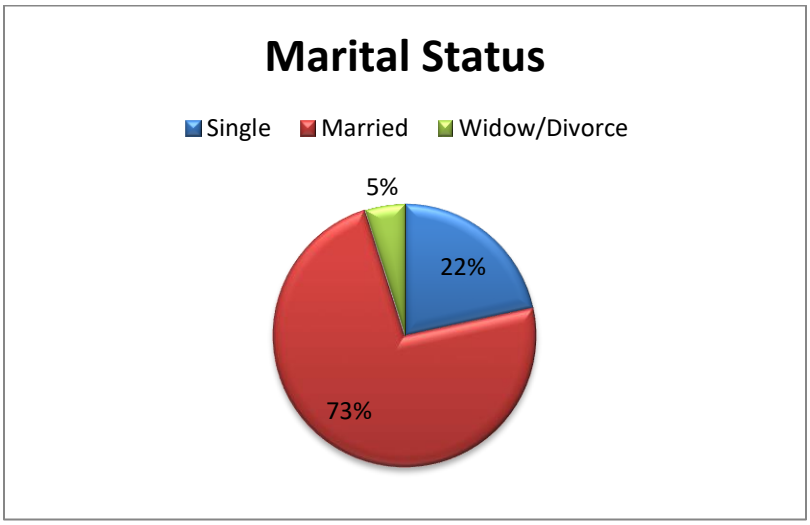


In the present study out of 166 auto rickshaw drivers, 13 (7.8%) were aged below 21 years, 86 (51.8%) were in the age group of 21-35 years, 47 (28.3%) were in the age group of 35-50 years and 20 (12.1%) were aged more than 50 years.

Table3. Marital status of study participants

Marital status	Frequency	Percent	Cumulative Percent
Single	36	21.6	21.3
Married	122	73.5	95.1
Widow/divorced	8	4.9	100.0
Total	166	100.0	

Figure5. Marital status of study participants



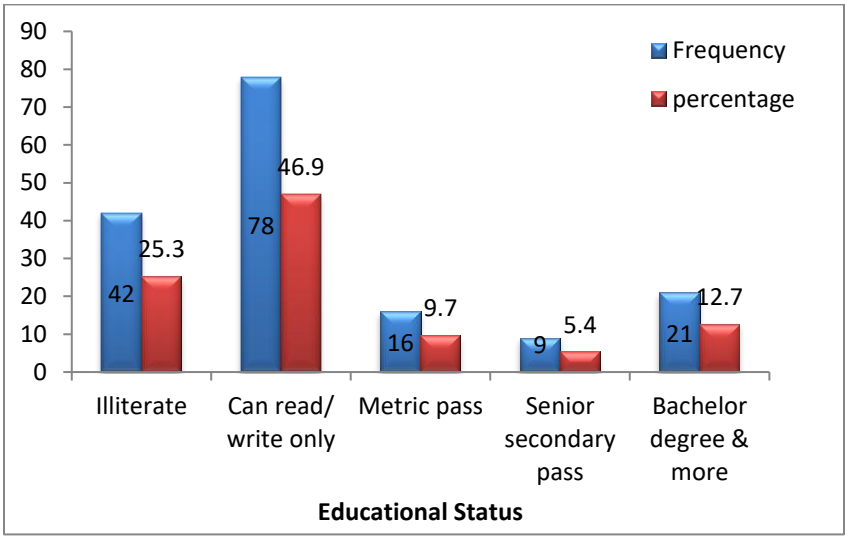
Out of 166 auto rickshaw drivers 36 (21.6%) were single/unmarried, 122 (73.5%) were married and the rest 8 (4.9%) was divorced or widow.

Table4. Distribution of study participants according to education

Educational qualification

S.No.	Educational status	Frequency	Percent
1	Illiterate	42	25.3
2	Can read/write only	78	46.9
3	Metric pass	16	09.7
4	Senior secondary pass	9	05.4
5	Bachelor degree & more	21	12.7
	Total	166	100.0

Figure6. Distribution of study participants according to education

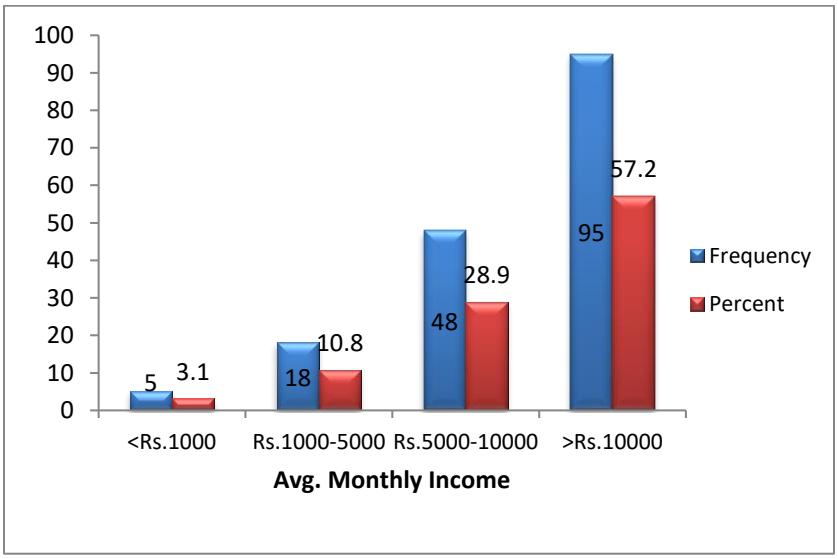


Among the study sample, 42(25.3%) were illiterate, 78 drivers (46.9%) were able to read and write, 16 drivers (9.7%) had studied up to 10th class, 9 (5.4%) had studied up to 12th class, 21(12.7%) had studied up to bachelor degrees or post graduation level.

Table5. Distribution of study participants according to monthly income

S.No.	Avg. monthly income (Rs.)	Frequency	Percent
1	<1000	5	03.1
2	1000-5000	18	10.8
3	5000-10000	48	28.9
4	>10000	95	57.2
	Total	166	100.0

Figure7. Distribution of study participants according to monthly income



Among the study participants, 5 (3.1%) had monthly income less than Rs.1000, 18 (10.8) had monthly income in the range of Rs.1000-5000, 48 (28.9%) had an income in the range of Rs.5000-10000 and 95 (57.2%) had an income more than Rs.10000 per month.

Table6. Distribution of participants according to their family members use tobacco products

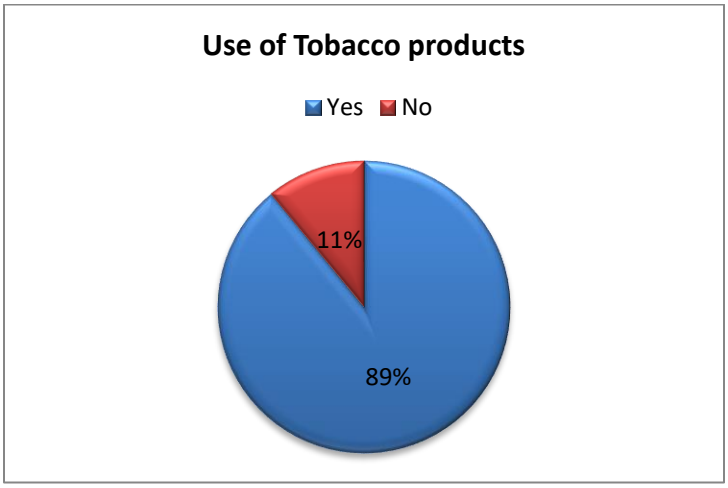
Response	Frequency	Percent
Yes	87	52.4
No	68	40.9
Not sure	11	06.7
Total	166	100.0

The above table clearly depicts that, 87 (52.4%) auto rickshaw drivers family member were using tobacco products, 68 (40.9%) elements of study had their family members who do not consume any type of tobacco products and 11 (6.7%) were not sure about their family member using tobacco products.

Table7. Distribution of study participants according to use of tobacco products

Response	Frequency	Percent
Yes	148	89.1
No	18	10.9
Total	166	100.0

Figure8. Distribution of study participants according to use of tobacco products

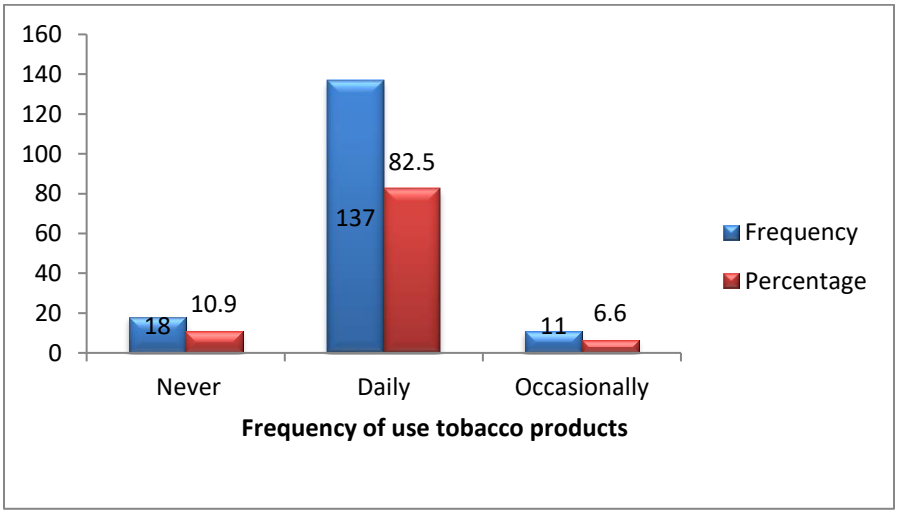


In the present study out of 166 auto rickshaw drivers, 148 (89.1%) were using tobacco products in some of its forms and 18 (11.9%) were never used tobacco products. The above mentioned figures clearly reveal that there is a high prevalence among auto rickshaw drivers for consumption of tobacco products.

Table8. Frequency of tobacco use

Response	Frequency	Percent
Never	18	10.9
Daily	137	82.5
Occasionally	11	06.6
Total	166	100.0

Figure9. Frequency of tobacco use



Out of 166 auto rickshaw drivers, 18 (10.9%) were never used tobacco products, 137(82.5%) were daily users and, 11 (6.6%) were occasionally used tobacco products.

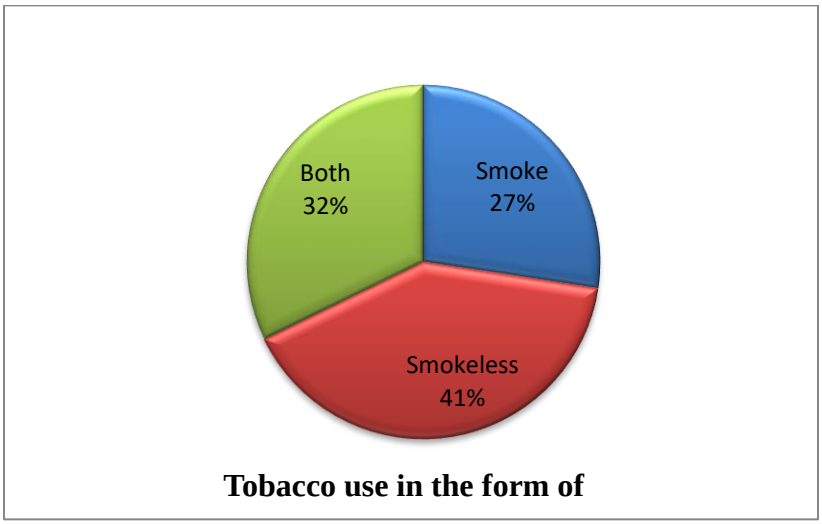
Table9. Type of tobacco products uses by study participants

Valid	166
Missing	18

Table10. Tobacco use (In the form of smoke & smokeless)

S.No.	Tobacco use	Frequency
1	Smoke	40
2	Smokeless	59
3.	Both	47

Figure10. Type of tobacco use (in the form of smoke & smokeless)

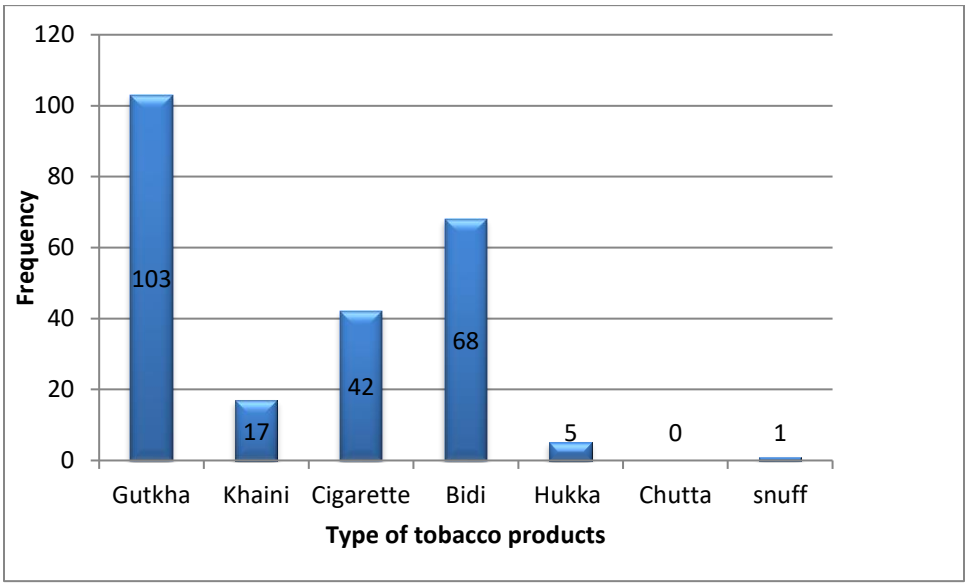


Among the study participants, 40 (27%) were only smoke tobacco products, 59 (41%) were use tobacco form in the form of chewing of tobacco or other form smokeless tobacco and 47 (32%) were using in both smoke as well as smokeless form of tobacco.

Table11. Distribution of participants according to various types of tobacco use

S.No.	Product	Frequency of respondent from a maximum of 148	% of respondent
1	Gutkha	103	69.59
2	Khaini	17	11.48
3	Cigarette	42	28.37
4	Bidi	68	45.95
5	Hukka	5	3.37
6	Chutta	0	0
7.	snuff	1	0.67

Figure11. Distribution of participants according to various types of tobacco use



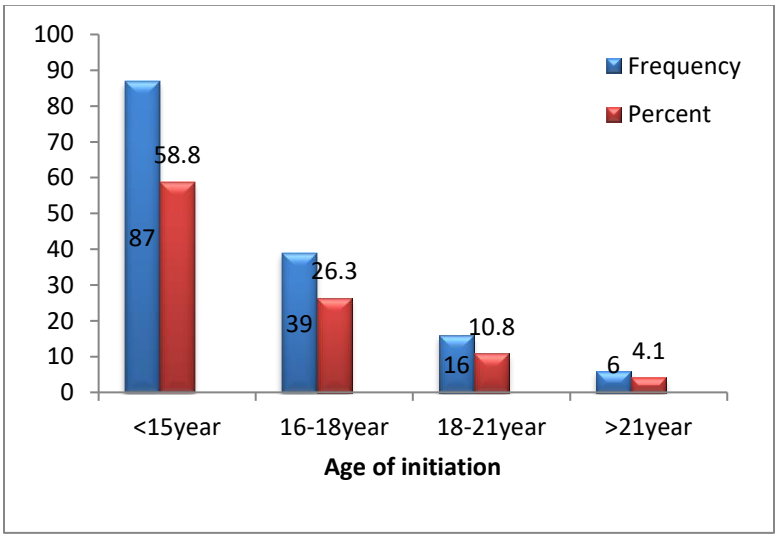
Out of 148 auto rickshaw drivers who were currently using tobacco products, 103(70%) were using gutkha, 17(11%) were using Khaini, 42(28%) were using cigarette, 68(46%) were using bidi, 5 were using Hukka and 1 using Snuff form for the use of tobacco products. There were about 47 participants who were using both forms of tobacco products.

Table12. Distribution of study participants according to their age of initiation

Age of initiation

	Frequency	Percent
<15year	87	58.8
16-18year	39	26.3
18-21year	16	10.8
>21year	6	04.1
Total	148	100.0

Figure12. Distribution of study participants according to their age of initiation

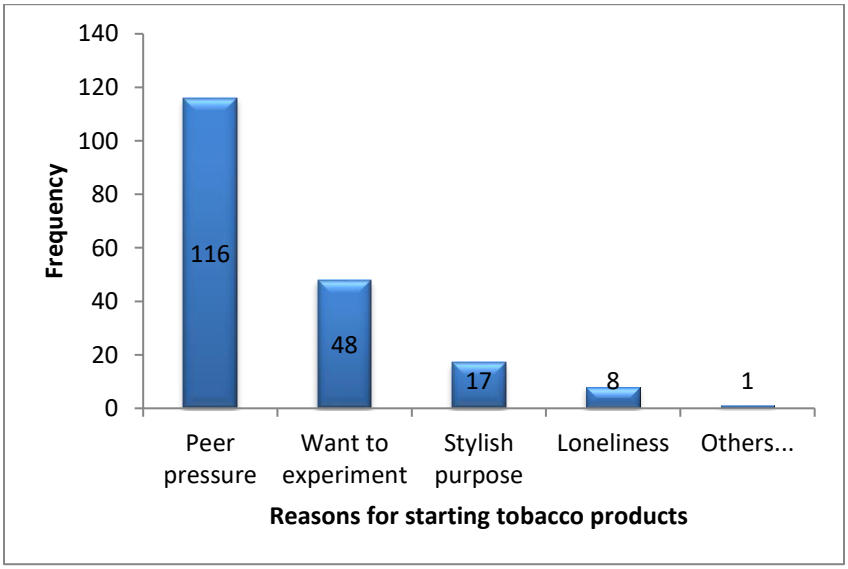


Out of 148 auto rickshaw drivers, 87 (58.8%) were started using tobacco products from the age of less than 15 years, 39 (26.3%) were started using in the age group of 16-18 years, 16 (10.8%) were started in the age group of 18-21 years and only 6 (4.1%) start after age 21. In the present study, results clearly depict that more than 85 % participants started using tobacco products at or below the age of 18 years.

Table13. Distribution of study participants according to reason for start tobacco products

S.No.	Reasons	Frequency of respondent from a maximum of 148	% of respondent
1	Peer pressure	116	78.37
2	Want to experiment	48	32.43
3	Stylish purpose	17	11.48
4	Loneliness	8	5.4
5	Others...	1	0.6

Figure13. Distribution of study participants according to reason for start tobacco products



In the present study 116(78%) tobacco users started using tobacco products because of peer pressure, 48(32%) were said that they want to experimentally use tobacco products, 17(11%) use for style purpose and 8(5%) were start because they feel loneliness. (At maximum number of 148)

Table14. Distribution of study participants according to amount of tobacco use per day

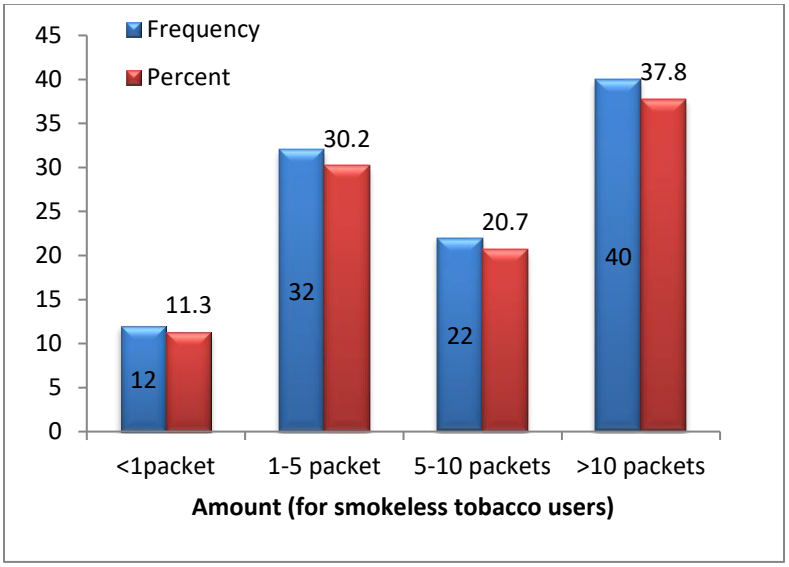
(A) For smokeless tobacco users

Amount per day for smokeless

	Amount	Frequency	Percent
1	<1packet	12	11.3
2	1-5 packet	32	30.2
3	5-10 packets	22	20.7
4	>10 packets	40	37.8
	Total	106	100.0

Out of 106 auto rickshaw driver who were using smokeless tobacco , 12 (11.3%) were using less than 1 packets of gutkha/Khaini, 32 (30.2%) were using gutkha/Khaini in the range of 1-5 packets per day , 22 (20.7%) were using in the range of 5-10 packets per day and 40 (37.8%) were using more than 10 packets per day.

Figure14. Amount per day for smokeless tobacco users



(**B**) For smoke users

Table15. Amount per day for smokers

S.No	Amount	Frequency	Percent
1	<1cigarette/bidi	4	04.6
2	1-5cigarette/bidi	16	18.4
3	5-10cigarette/bidi	22	25.3
4	>10cigarette/bidi	45	51.7
	Total	87	100.0

Out of 87 auto rickshaw driver who were using smoking products , 4(4.6%) were smoking less than one cigarette/ bidi per day or use occasionally , 16 (18.4%) were smoking 1-5 cigarette/bidi per day , 22 (25.3%) were smoking 5-10 cigarette/bidi per day and 45 (51.7%) were smoking more than 10 cigarette/ bidi per day.

Figure15. Amount per day for smokers

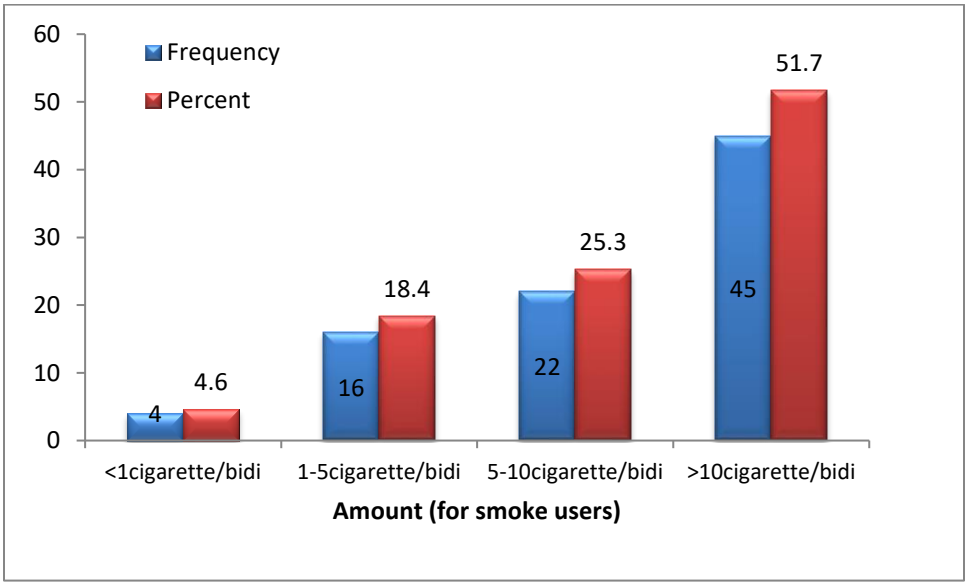


Table16. Distribution of study participants according to out of pocket expenditure on tobacco products (**Per day spends money on tobacco)**

S. No	Per day spends money(Rs.)	Frequency	Percent
1	< Rs.10	16	10.8
2	Rs.10- 50	82	55.4
3	Rs.50-100	36	24.3
4	>Rs.100	14	9.5
	Total	148	100.0

Out of 148 auto rickshaw drivers, 16 (10.8%) were spending less than Rs.10 per day on tobacco products, 82 (55.4%) were spending Rs.10-50 per day, 36(24.30%) were spending Rs.50-100 per day and 14 (9.5%) were spending more than Rs.100 per day on tobacco products.

Figure16. Distribution of study participants according to out of pocket expenditure on tobacco products (**Per day spends money on tobacco)**

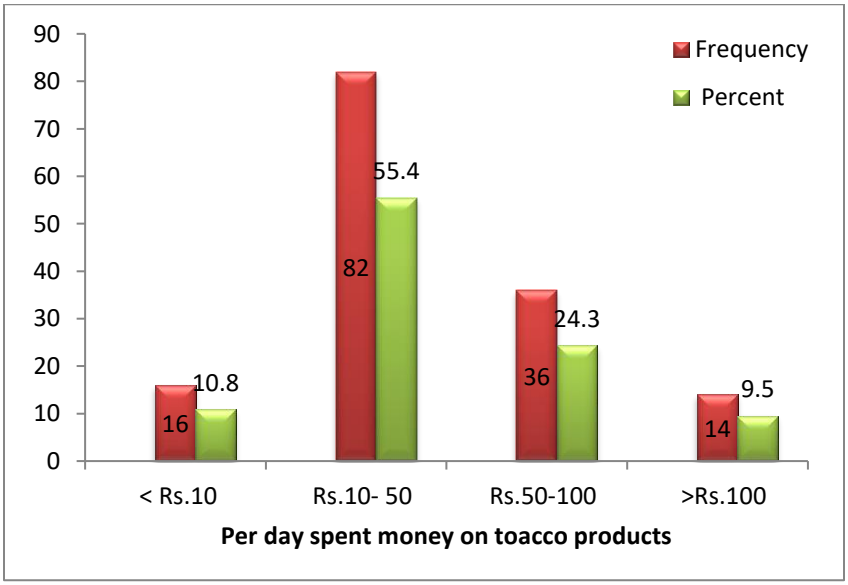


Table17. Distribution of study participants according to reasons for continued use of tobacco products

S.No	Reasons	Frequency of respondent from a maximum of 148	% of respondent
1	To reduce stress	32	21.6
2	To be awake	41	27.7
3	To remove nervousness	56	37.8
4	For fun	21	14.18
5	No reasons	93	62.83
6	Other	8	5.4

Out of 148 auto rickshaw drivers 32 said that they were using tobacco products to reduce stress, 41 were used to keep themselves awake, 56 were using to avoid nervousness, 21 for fun and 93 were using without any specific reason while 8 were used for other reasons.

Figure17. - Distribution of study participants according to reasons for continued use of tobacco products

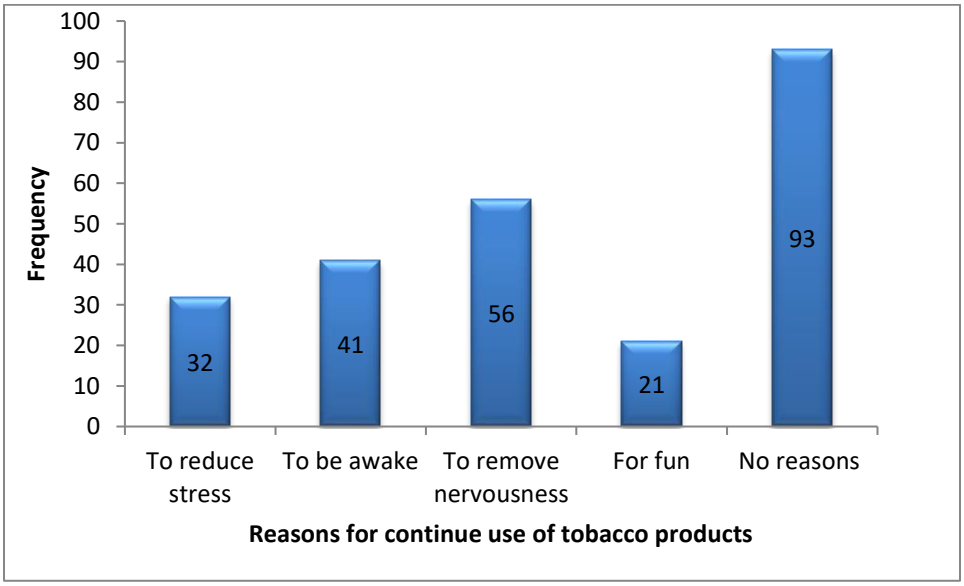


Table18. Distribution of study participants according to their opinion regarding tobacco related diseases can affect them.

Response	Frequency	Percent
Yes	143	86.1
No	23	13.9
Total	166	100.0

Out of 166 auto rickshaw driver more than 86% participant's think that tobacco related diseases can affect them while 14 % think that tobacco related diseases can't affect them.

Table19. Distribution of study participants according to their awareness regarding harmful effects of tobacco use

Response	Frequency	Percent
Yes	113	68.1
No	38	22.8
Not sure	15	09.1
Total	166	100.0

In the present study out of 166 participants, 113 (68.1%) were aware about harmful effect of tobacco use, 38 (22.8%) were not aware about any harmful effect of tobacco use and 15 (9.1%) were not sure about any harmful effects of tobacco use.

Figure18. Distribution of study participants according to their awareness regarding harmful effects of tobacco use

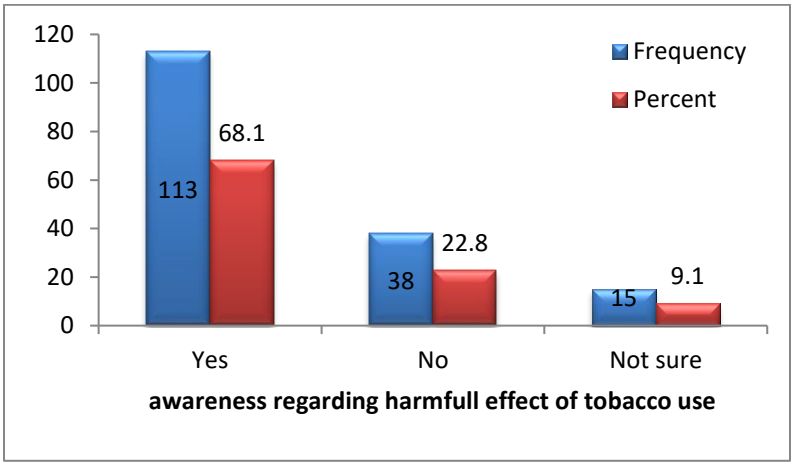


Table20. Distribution of study participants according to their awareness level for various health diseases due to tobacco use

S.No	Diseases	Frequency of respondent from a maximum of 148	% of respondent
1	Cancer	102	61.44
2	Lungs Disease	38	22.90
3	Stomach Problem	11	6.62
4	Mouth Problem	23	13.85
5	Others	17	10.24

Out of 166 auto rickshaw drivers, 102(61%) were aware that tobacco usage leads to cancer, 38(23%) were aware about lung diseases, 11(6%) were aware about stomach problems, 23(14%) were aware about mouth problems (ulcers, burning sensation) and 17(10%) aware about other disease like heart diseases, blood disorder.

Figure19. Distribution of study participants according to their awareness level for various health diseases due to tobacco use

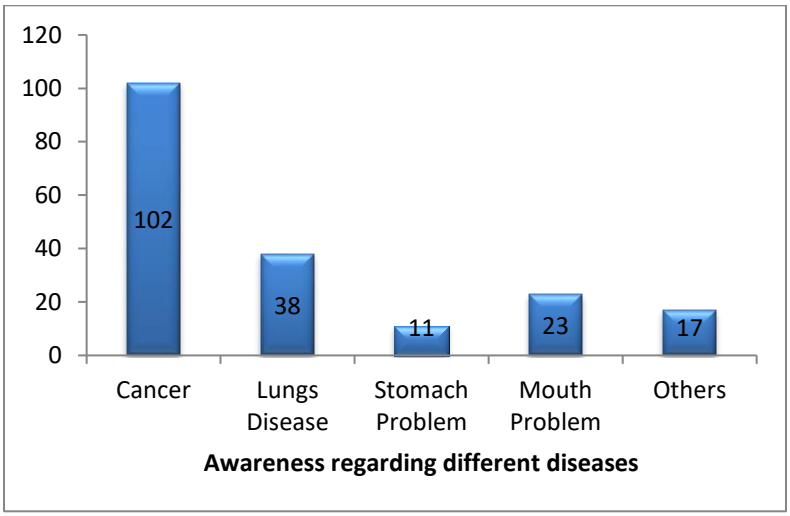


Table21. Distribution of study participants according to the presence of diseases due to use of tobacco products

S.NO	Response	Frequency	Percent
1	Yes	84	56.75
2	No	64	43.25
	Total	148	100.0

Out of 148 auto rickshaw drivers, 84 (57%) were suffering from diseases due/having symptoms of diseases to use of tobacco products while 64 (43%) were not suffering from any diseases.

Table22. Distribution of study participants according to presence of different diseases in participants with use tobacco

S.No.	Diseases	Frequency of respondent from a maximum of 148	% of respondent
1	Cough	39	46.42
2	Chest pain	12	14.28
3	Mouth ulcers	27	32.14
4	Burning sensation	24	28.57
5	Bleeding gums	6	07.14
6	Dysphasia	15	17.85
7	Other	9	10.71

Out of 84 auto rickshaw drive who have disease due to use of tobacco products , 46% suffer from cough, 14% had complained of chest pain, 67% have mouth problems(mouth ulcers, burning sensation , bleeding gums), 18% have complained of dysphasia and 11 % had other diseases(heart related diseases , difficulty in mouth opening)

Figure20. Distribution of study participants according to presence of different diseases in participants with use tobacco (percentage distribution)

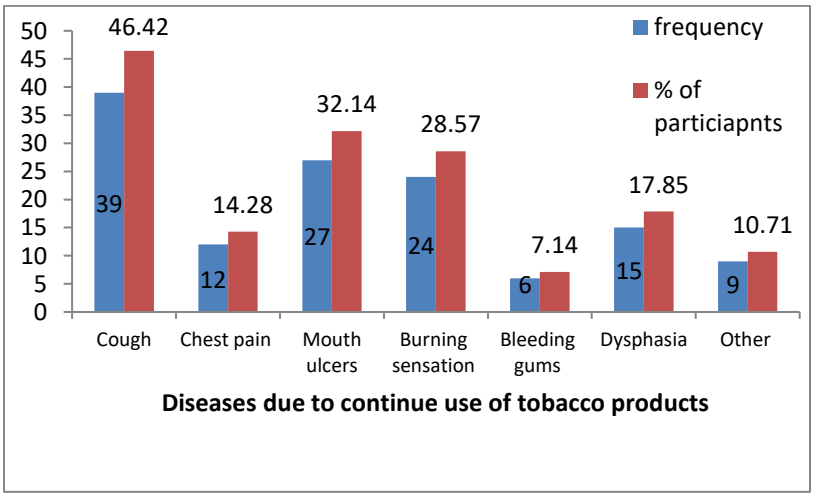
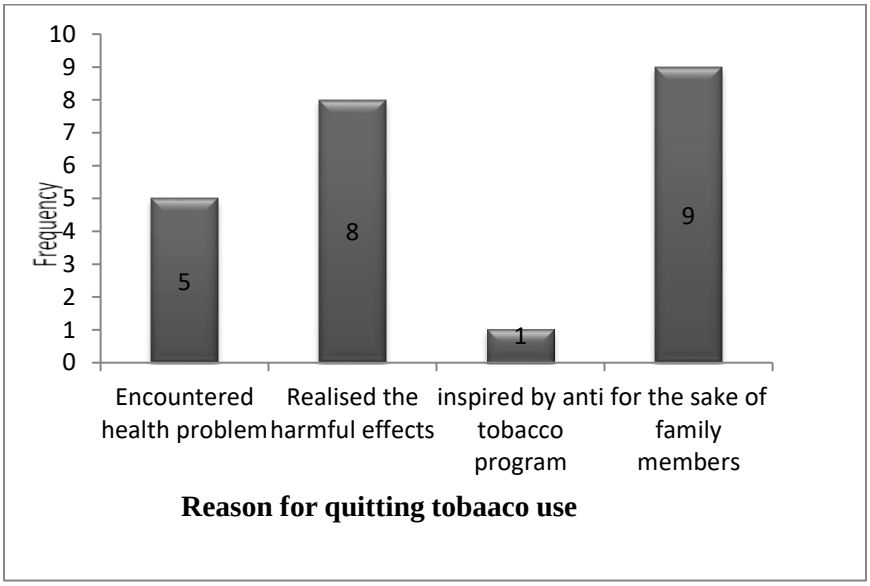


Table23. Distribution of study participants according to their effort towards quit tobacco habit

Response	Frequency	Percent
Yes	79	53.2
No	69	46.8
Total	148	100.0

Out of 148 auto rickshaw drivers who using tobacco products 79(53%) were trying to quit tobacco habit while 69 (47%) were never trying to leave tobacco habit.

Figure21. Reasons to quit the habit



Out of 79 auto rickshaw driver who tried to leave tobacco habit, 23 (29%) were successfully left the habit of smoking. Reasons behind successful of quitting the tobacco habit, 5(21%) were encountered health problem, 8(34%) of participants realised the harmful effect of tobacco, 1(5%) inspired by anti tobacco program and 9(40%) were quitting the habit for the sake of family members

(B) Reasons for continuing the habit – Out of 79 auto rickshaw driver who tried to leave tobacco habit, 56 drivers were continuing to use tobacco habit because of its addiction.

Table24. Distribution of study participants according to participation in any anti tobacco program

	Frequency	Percent
Yes	13	08.7
No	135	91.3
Total	148	100.0

Out of 148 auto rickshaw drivers who use tobacco products, 13 (8.7%) participated in any anti tobacco program while 135 (91.3%) were never participating in any anti tobacco program.

Figure22. Distribution of study participants according to participation in any anti tobacco program

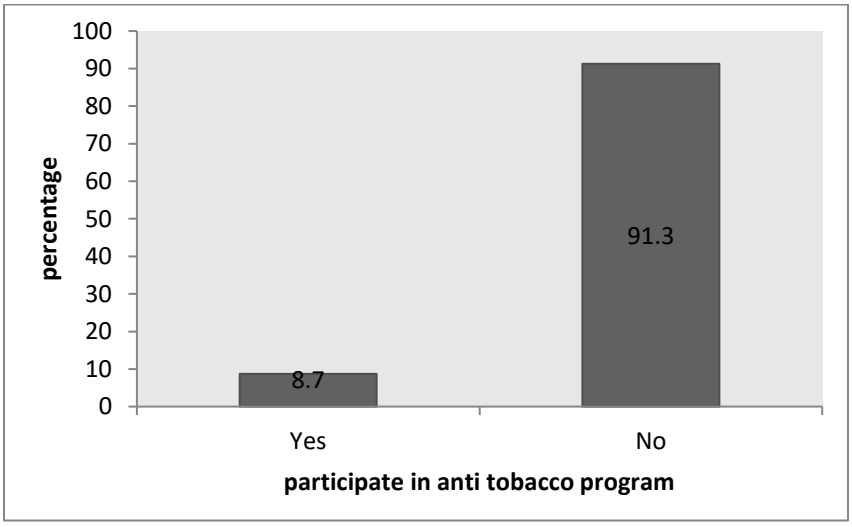


Table25. Distribution of study participants according to their opinion regarding effect of warning labels on tobacco users

Response	Frequency	Percent
Yes	72	43.4
No	94	56.6
Total	166	100.0

Out of 166 auto rickshaw drivers, 72(43%) were saying that warning label on tobacco products effect tobacco users while 94 (57%) were saying that warning labels won't effect on the use of tobacco by users.

Figure23. Distribution of study participants according to their opinion regarding effect of warning labels on tobacco users

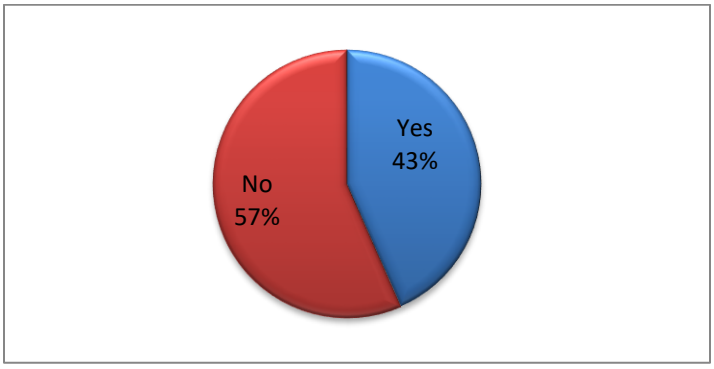


Table26. Shows opinion of study participants regarding price increase of tobacco products reduces its consumption

S.No.	Response	Frequency	Percent
1	Yes	81	48.8
2	No	77	46.4
3	Not Sure	8	4.8
	Total	166	100.0

Out of 166 auto rickshaw driver, 81 (49%) were saying that increase price of tobacco products reduces its consumption, 77 (46%) were saying that increases price of tobacco doesn't effect on its consumption and 8 (5%) were not sure about the price increase and its consumption relation.

Figure24. Shows the opinion of study participants regarding price increase of tobacco products reduces its consumption

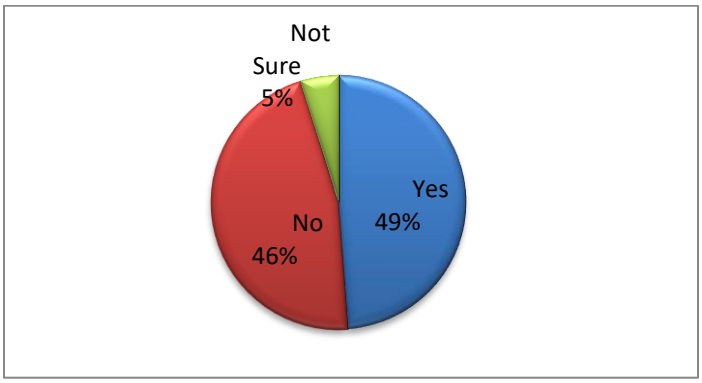
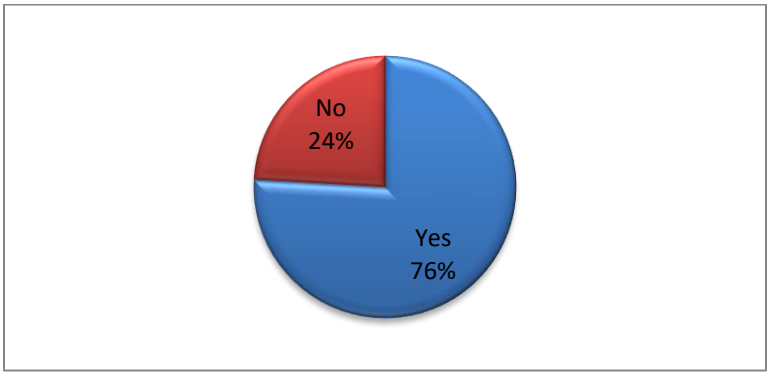


Table27. Shows the opinion of study participants regarding the tobacco ban in Rajasthan

Response	Frequency	Percent
Yes	126	75.9
No	40	24.1
Total	166	100.0

More than 75 % auto rickshaw driver in the favour of tobacco ban while 25 % were said that tobacco should not be banned in Rajasthan.

Figure25. Opinion of study participants regarding the tobacco ban in Rajasthan



8.0 DISCUSSION:-

Study finding indicates that the majority of the auto rickshaw drivers are tobacco users (89%). In the current study majority of the auto rickshaw driver were present in the age group of 21-35 years. More than 70 % of total populations of the auto rickshaw driver were either illiterate or only able to read and write. In the current study majority of respondents have salary range more than Rs.10000. Around 50 % of their family members were also in use of tobacco products. The majority of the auto rickshaw drivers daily use tobacco products while a very less number of drivers use occasionally for the purpose of fun.

Findings show that in current tobacco users; gutkha use is high in the respondents. Further results clearly points out the indigenous smoking product such as bidi which is the second most preferable choice of tobacco. In comparison to the smoking products, use of smokeless tobacco is much more common in the auto rickshaw drivers. Furthermore; it has been found that education plays its major role; as maximum users were uneducated or non-educated but they have fair knowledge about the harmful effect of tobacco use on health. In fact they understood well about the cancer related health problems due to tobacco use. The data suggest that associated factors for tobacco use are due to friends and their influence; users started this habit of tobacco in early adolescent age, i.e. Under 15 years.

The amount of consumption is very high i.e. 10-15 cigarette/bidi/gutkha in a day. Around 55% auto rickshaw driver spend Rs.50 per day on tobacco products. Reason behind to continue use of tobacco products are to reduce stress, to stay energetic during their work rather than lethargy but majority of them are into tobacco use with no reasons. More than 85% participants say that tobacco related disease can affect them despite of that they are consuming tobacco in one or the other form. Large number of the auto rickshaw drivers suffers from tobacco related diseases like cough, mouth problems (ulcer, burning sensation). Half of the users tried to quit this habit but because of addiction to tobacco use; 70% participants started again. So government should focus on the interventions targeting such group of auto rickshaw drivers so that we can motivate their peer group fellows to quit the habit of tobacco use. The present study shows that increase of the price of tobacco can affect its consumption. Around 76% auto rickshaw drivers were in the favour of tobacco ban in Rajasthan. Scientific evidence shows that graphic health warnings are

the most cost effective interventions to educate people regarding tobacco. In addition to this according to GATS India many attempted to limit the use of tobacco via counselling, pharmacotherapy and drug addiction centre. Hence we should encompass our strategy and policies through this technique.

But in comparisons to the past studies worldwide none of them have covered particularly auto rickshaw drivers who are the most vulnerable group of individuals sustaining to such type of abuses. But same result has been observed in the study conducted for auto rickshaw drivers "National tobacco control program-me "teachers guide". It states that use of tobacco leads to the all major respiratory and gastric problems. Addition to this my study revealed the same result as that of GATS that Gutkha is the most commonly used form of tobacco.

Affordability of the indigenous smoking and smokeless tobacco products is an important factor that increases the access to these products in the region. The smokeless tobacco products are cheaper than the cigarettes, due to the fact that the tax imposed on such products is much less than that of cigarettes. These lower the price and increase the affordability and access to the major segment of the population.

So this is important for any national level control programme or state level polices to do a deep research on the above said issues as India is one of the most prevalent countries with regards to non-communicable diseases.

9.0 CONCLUSION – in conclusion we say that

- Prevalence among auto rickshaw drivers of consumption of tobacco products was very high.
- Auto rickshaw drivers were mostly used tobacco in the form of Gutkha (smokeless) and bidi (smoke) in comparison to other products. It also shows that they use cheap tobacco products.
- Most of the auto rickshaw drivers start using tobacco products in age less than 18 years and they start it within peer pressure, which is also a high focus area of government.
- Mostly they use tobacco products to reduce stress, to be awake or to remove nervousness but a large number of participants also use them without any reason.
- Awareness level among auto rickshaw driver was high but still uses tobacco products because of its addiction.
- Almost one half of the study population was suffering from tobacco related diseases like cough, ulcer on mouth, lung disorder.
- Only one fourth study participant quit his tobacco use habit after encountering a health problem or after realizing harmful effect on health.
- Failures of anti-tobacco programs are also a serious issue because very less number of auto rickshaw driver participated in anti-tobacco programs.
- Increase in the price of tobacco products also reduced its consumption.
- The majority of the auto rickshaw drivers were in favour of tobacco ban in Rajasthan.

10.0 RECOMMENDATIONS:-

- Educate & create awareness regarding ill effect of tobacco consumption and its side-effects in the early age of life.
- To promote an alternate product like mouth fresheners' (with reducing price), which are good for health.
- Make advertisement at the commercial level by using banners, organizing cultural programs, entertainment education regarding its ill effect on health.
- Opening of De-Addiction centre around their locality.
- Various training programs to motivate those rickshaw pullers who tried to quit the habit of tobacco use.
- Strictly banned in Rajasthan.

11.0 LIMITATION –

- Because of the time limitation we were not able to conduct studies on a large scale; there is a need to interview the peer group of a rickshaw puller to get more information related to the lifestyle and other prospective of their peer mates towards tobacco.
- To review other study there is very limited number of study present.

12.0 References

1. WHO Report on the Global Tobacco Epidemic, 2009: Implementing Smoke-Free Environments. Geneva, World Health Organization, 2009/http://www.who.int/tobacco/publications/gender/en_tfi_gender_women_prevalence_tobacco_use.pdf.
2. http://www.whoindia.org/LinkFiles/Assessment_of_Burden_of_NCD_Introduction_Assessment_of_Burden_of_NCDs.pdf.
3. Report on oral tobacco use and its implications in south East Asia.
4. http://www.whoindia.org/LinkFiles/ GYTS_India_Rajasthanfactsheet.pdf.
5. Gupta R. Sharma SC, Gupta VP, Gupta KD. Smoking and alcohol intake in a rural population and correlation with hypertension and coronary heart disease prevalence. J. Assor Physician, India, 1995:43::255-58
6. M.A. Ushie. R.P. Abia, E.P. Archibong, & A.D. NsemoISSN : 2186-8492 Vol. 1 , NO. 4. November 2012
7. M M Nagargoje1, S S Kubde2, S C Gupta3, S K Misra, Chaudhary/Prevalence of Cardiovascular Diseases risk factors among auto-rickshaw drivers/Indian Journal of Community Health Vol. 22 No. 2, Vol. 23 No. 1 July 2010-June 2011
8. Sankaranarayana R. Oral cancer in India: An epidemiological and clinical review. [Online]. Available from: URL:http://www.sciencedirect.com/science/article.
9. Dr Khan ZU. An overview of oral cancer in the Indian subcontinent and recommendations to decrease its incidence. [Online]. 2012 [cited 2012 Aug 05]. Available from: URL:http://www.webmedcentral.com/article_view.
10. Guralani P. Tobacco addiction higher among unskilled workers. [Online]. 2012. [cited 2012 Jun 06]. Available from : URL: http: //articles. Times of India/Nagpur/tobacco-addiction-unskilled-workers
11. Rahaman M, Awai AS, Fukire T, Sakamoto J. Prevalence of cigarette and bidi smoking among rickshaw pullers in Dhaka city. Preventive medicine.[online].2007.[2007 march].Available from :URL:http://www.sciencedirect.com/science/article.

12. Per Gustavsson, Lars Alfredsson, Hans Brunnberg, NiklasHammar, Robert Jakobsson,ChristinaReuterwall, PiroskaOstlin, Occupational and Environmental Medicine 1996;53:235-240
13. HelleSoll-Johanning, Elsa Bach, Jørgen H Olsen, Finn Tüchsen, *Occup Environ Med* 1998;**55**:594–598
14. V.O.Laesbikan and B. Ojediran/ international scholary research network/ ISRN public health volume 2012, article Do 580484/ doi :10.5402/2012/580484
15. Ramakrishnan V, Kumar SG, Govindaraju S. Cytogenetic analysis of micronuclei, sister chromatid exchange and Chromosomal aberration in pan masala chewers. Internationl Journal of plasma and Bio sciences.[online].2011.[cited 2011 jul-sept].Available from:URL:http://www.ijpbs.net/vol-2_issue 3
16. Sujatha D, Hebbar PB, Pai A. Prevalence and correlation of oral lesions among tobacco smokers,tobacco chewers areca nut and alcohol users.[online].2012;13(4) . Available from :URL: http://www.ncbi.nlm.nih.gov/pubmed
17. Chaudhary, M M Nagargoje1, S S Kubde2, S C Gupta3, S K Misra/Prevalence of Cardiovascular Diseases risk factors among auto-rickshaw drivers/Indian Journal of Community Health Vol. 22 No. 2, Vol. 23 No. 1 July 2010-June 2011
18. Virendra Singh, Bharat Bhushan Sharma, PuneetSaxena, HardayalMeena, DayaKrishanMangal/ Price and consumption of tobacco/ *Lung India, Vol. 29, No. 3, July-September, 2012, pp. 212-216*
19. Dr. Prabhat Jha & Dr. Frank Chalouplea/"Tobacco control in Developing countries"/ISBN/http://siteresources.worldbank.org/INTETC/Resources/375990-1089904539172/474683-1089904575523

13.0 ANNEXURE

A CROSS-SECTIONAL STUDY ON TOBACCO CONSUMPTION PATTERN AMONG AUTO RICKSHAW DRIVERS IN JAIPUR CITY, RAJASTHAN

Thank you for agreeing to do this survey about tobacco use. It is for both smokers and non-smokers. For most people it takes only about 10 minutes to complete. I will introduce each question. All you need to do is give me your answer, being as truthful and accurate as you can.
bl **rEckdw mRiknks ds mi;ksx** ds losZ{k.k esa Hkkx ysus gsrq vkidk /kU;oknA ;g losZ{k.k /kqeziku djus okys rFkk ugh djus okys lHkh izfrHkkfx;ksa ds fy, gSA vf/kdrj izfrHkkxh;ksa esa losZ{k.k gsrq fy, tkus okyk le; izfr izfrHkkxh nl feuV gS] vkidks cl lgh tokc nsuk gSA

Signature of participant (for consent purpose) ---------- Date - -- / 05 / 2013
izfrHkkxh ds gLrk{kj ¼lgefr ds m}s'; gsrq½

S. No. Ø-la-	Questions iz'u	Coding categories dksfMax	Response izfrfØ;k
1.	**Age mez**	1. <21 year	
		2. 21 - 35	
		3. 35-50	
		4. >50 year	
2.	**Address/Location irk**		
3.	**Religion /keZ**	1. Hindu fgUnw	
		2. Muslim eqfLye	
		3. Sikh fl[k	
		4. Others specify) vU;	
4.	**Marital Status oSokfgd fLFkfr**	1. Single vfookfgr	
		2. Married fookfgr	
		3. Widow/divorced	

		fo/kok@rykd'kqnk	
		4. Other (specify) vU;	
5.	**Educational Qualification 'kS{kf.kd ;ksX;rk**	1. Illiterate vlk{kj	
		2. Can Read/Write Only dsoy i<+us o fy[kus esa leFkZ	
		3. Metric Pass 10 oha ikl	
		4. Senior Secondary Pass 12 oha ikl	
		5. Bachelor Degree Lukrd	
		6. Master Degree LukrdksÙkj	
6.	**Monthly Income ekfld vk;**	1. <1000	
		2. 1000-5000	
		3. 5000-10000	
		4. >10000	
7.	**Any of your family members use tobacco products D;k vkids ifjokj dk dksbZ lnL; rackdw mRiknksa dk mi;ksx djrk gS**	1. Yes gkW	
		2. No ugh	
		3. Not sure irk ugh	
8.	**Do you use tobacco? D;k vki rackdw dk mi;ksx djrs gS**	1. Yes gkW	
		2. No ugh	
		3. Some Time dHkh&dHkh	
	If yes than ;fn gkW rk**s**	1. Daily jkstkuk	
		2. Occasionally dHkh&dHkh	
9.	**Type of tobacco use** rEckdw ds bLrseky dk izdkj	1. Gutkha xqV[kk	
		2. Khaini [kSuh	
		3. Cigarette flxjsV	
		4. Bidi fcM+h	
		5. Hukka gqDdk	

		6. Chutta NqV~Vk	
		7. Snouf u'kk	
		8. Other vU;----------	
10.	**Age of initiation of tobacco products** **vkius fdl mez ls rackdw mRiknksa dk mi;ksx izkjEHk fd;k Fkk**	1. <15 Yrs	
		2. 15- 18 Yrs	
		3. 18-21 yrs	
		4. >21 Yrs	
11.	**Reason for start using tobacco products.** **rEckdw mRiknksa ds mi;ksx dks izkjEHk djus dk dkj.k**	1. Peer Pressure lgdehZ ncko	
		2. Want to Experiment iz;ksx djuk pkgrs Fks	
		3. Stylish Purpose fn[kkus gsrq	
		4. Lonely vdsykiu	
		5. Other vU; ---------- ---------- ----------	
12.	**Amount of tobacco used(per day)-** rEckdw ds bLrseky dh jkf'k ¼izfrfnu½		
	For Smokeless Tobacco Users fu/kwZe@/kqeziku jfgr rEckdw mi;ksx dÙkkZvks ds fy,	1. < 1 Packet < 1iSdsV	
		2. 1-5 Packets 1-5iSdsV	
		3. 5-10 Packets 5-10iSdsV	
		4. > than 10 Packets > 10 ls T;knk iSdsV	
	For Smoke Users /kweziku dÙkkZvksa ds fy,	1. <1 Cigarette/Bidi < 1 flxjsV@1 fcM+h	
		2. 1-5 Cigarette/Bidi 1-5 flxjsV@ fcM+h	
		3. 5-10 Cigarette/ Bidi 5-10 flxjsV@	

		fcM+h	
		4. >10 Cigarette/ Bidi > 10 flxjsV@ fcM+h	
13.	**daily out of pocket expenditure due to tobacco use** **izfrfnu rackdw mRiknksa ds fy, [kpZ dh tkus okyh jkf'k**	1. <10 Rs.	
		2. 10-50 Rs.	
		3. 50-100 Rs	
		4. >100 Rs	
14.	**Reason for continue use of tobacco products-** **rEckdw mRiknksa ds mi;ksx dks tkjh j[kus dk dkj.k**	1. To Reduce Stress ruko de djus gsrq	
		2. To Be Awake tkxus ds fy,	
		3. To remove nervousnessFkdku @?kcjkgV nwj djus gsrq	
		4. For fun eLrh ds fy,	
		5. No Reason dksbZ dkj.k ugh	
		6. Other ¼vU;½ ----------	
15.	**since when you are consuming tobacco products-** **vki dc ls rackdw mRiknksa dk mi;ksx dj jgs gS**	1. <1yrs	
		2. 1-5 Yrs	
		3. 5-10 Yrs	
		4. >10 Yrs	
16.	**Can you spend a single day without use tobacco products-** **D;k vki ,d fnu Hkh fcuk rackdw mRiknks ds jg ldrs gS**	1. Yes gkW	
		2. No ugh	
		3. May be 'kk;n	
		4. Never try to leave dHkh iz;kl ugh fd;k	
17.	**Are you aware of fact that tobacco products cause's harmful effect on human body?** **D;k vki ekuo 'kjhj ij rackdw mRiknksa ds**	1. Yes gkW	
		2. No ugh	
		3. Not sure irk ugh	

	mi;ksx ds gkfudkjd izHkko dks tkurs gS		
	If yes than which type ;fn gkW rks fdl rjg ds	1. Cancer dSUlj	
		2. Lungs Disease QsQM+ks ls lEcfU/kr fcekjh	
		3. Mouth Problem (Ulcer, Bleeding Gum, Burning Sensation Etc.)eqag ls lEcaf/kr chekjh ¼vYlj] elwM+ksa ls [kwu fudyuk] tyu dk vuqHko bR;kfn½	
		4. Stomach Problem (Gastritis, Ulcers)isV lEcaf/kr chekjh	
		5. Others vU; ----------	
18.	**Do you ever suffered from any tobacco related diseases –** **D;k vki dHkh rEckdw mRiknksa lcaf/kr fdlh fcekjh ls xzflr z jgs gS**	1. Yes gkW	
		2. No ugh	
	If yes than please specify ;fn gkW rks fdl rjg dh	1. Cough [kkalh	
		2. Chest pain Nkrh esa nnZ	
		3. Mouth ulcers eaqg esa vYlj	
		4. Burning Sensation in Mouth eaqg esa tyu	
		5. Bleeding Gums elwMksa ls [kwu fudyk	
		6. Dysphasia 'aokl ysus esa nnZ	

		gksuk	
		7. Other vU;----------	
19.	**Are you suffering from any of disease?** **D;k vki vHkh fdlh rjg dh fcekjh ls xzflr gS**	1. Yes gkW	
		2. No ugh	
	If yes ;fn gkW rks	1. Cough [kkalh	
		2. Breathlessness lkl ysus esa rdyhQ	
		3. Loss of Weight otu de gksuk	
		4. Chest Pain Nkrh esa nnZ	
		5. Mouth Ulcers eqgW esa vYlj	
		6. Burning Sensation in Mouth eqgW esa tyu	
		7. Bleeding Gums elqM+ksa ls [kwu fudyuk	
		8. Dysphasia lkal ysus esa nnZ	
		9. Other vU; --	
20.	**Do you think that tobacco related disease can effect you** **D;k vkidks yxrk gS fd rackdw lcaf/kr fcekjh vkidks Hkh fcekj dj ldrh gS**	1. Yes gkW	
		2. No ugh	
21.	**Did you ever make an attempt to quit the habit?** **D;k vkius dHkh viuh vknr NksMus dk iz;kl fd;k gS**	1. Yes gkW	
		2. No ugh	
22.	**Were you successful in quitting the habit?** **D;k vki viuh rackdw lcaf/kr vknrksa dk NksM+**	1. Yes gkW	
		2. No ugh	

	ik;sa		
	If yes then what is the reason for quitting the habit ;fn gkW rks blds ihNs D;k dkj.k Fkk\	1. Encountered health hazards LokLF; lEca/kh uqdlku gksus ds ckn	
		2. Realised the harmful effects blds ?kkrd izHkko Kku gkssus ds ckn	
		3. Inspired by any anti tobacco program rackdw fojks/kh dk;ZØe ls izHkkfor	
		4. For the sake of family members ifjokj ds fy,	
	If No then what is the reason for not quitting the habit- **;fn ugh rks vki D;ksa ugh NksM+ ik;sa**	1. Addiction yr	
		2. Don't feel it is necessary to quit the habit vknr NksMuk t#jh ugh yxk	
		3. Any other vU; ---------- …….....	
23.	**Have you ever participated in any anti tobacco program?** **D;k vkius dHkh fdlh u'kkca/kh@rackdw fojks/kh dk;ZØe esa Hkkx fy;k gS**	1. Yes gkW	
		2. No ugh	
24.	**Do you think warning labels on tobacco products can effect on users minds-** **D;k vkidks yxrk gS fd rackdw mRiknks ij mifLFkr psrkouh lans'k mi;ksxdÙkkZvksa ij dksbZ izHkko Mkyrk gSa**	1. Yes gkW	
		2. No ugh	

25.	**Do you think that increase in price of tobacco product reduce its consumption** **D;k vkidks yxrk gS fd rackdw mRiknksa ds ewY; dks c<+kus ls blds mi;ksx ij dksbZ izHkko iMrk gS**	1. Yes gkW	
		2. No ugh	
		3. Not sure irk ugh	
26.	**Do you think tobacco consumption shall be banned?** **D;k vkidks yxrk gS fd rackdw mi;ksx dks izfrcaf/kr dj fn;k tkuk pkfg,**	1. Yes gkW	
		2. No ugh	

Any comments regarding study ¼v/;;u lcaf/kr dksbZ lq>ko@fVIi.kh½ ----------
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