

SUMMER INTERNSHIP PROJECT

ON

**LIFESTYLE INTERVENTION TO REDUCE RISK AND PREVALENCE OF
HYPERTENSION AMONG URBAN POOR OF DELHI: QUASI – EXPERIMENTAL
STUDY**

IMPLEMENTED BY – IIHMR, DELHI

SUPPORTED BY - ICMR DELHI

FROM

(18-04-2022 to 18-06-2022)



A

REPORT

ON

**TOBACCO AS A RISK FACTOR IN HYPERTENSION AMONG URBAN POOR
POPULATION OF SOUTHWEST REGION OF DWARKA**

UNDER GUIDANCE

OF

DR.BS SINGH

(ASSOCIATE PROFESSOR AT IIHMR DELHI)

BY

DR. AARUSHI KHOSLA

(1st YEAR PGDM- 2021-2023)

AT

INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT AND RESEARCH

NEW – DELHI

Certificate of approval

The Summer Internship Project of titled Tobacco – **TOBACCO -RISK FACTOR IN HYPERTENSION AMONG URBAN POPULATION OF SOUTHWEST REGION OF DWARKA** at **IIHMR DELHI** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily 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 report only for the purpose it is submitted.



Dr. Pankaj talreja

Assistant Professor at IIHMR, Delhi

FEEDBACK FORM

(Organization Supervisor)

Name of the Student: Dr. Aarushi Khosla

Summer Internship Institution: IHNR, Delhi

Area of Summer Internship: Goyla dairy

Attendance: 98.8%

Objectives met: Yes

Deliverables:

- Data collection
- Anthropometric measurements
- Completion of summer internship report

Strengths:

- Hard working
- Dedication towards work.
- Good communication skills.

Suggestions for Improvement: keep doing the good work.

Signature of the Officer-in-Charge (Internship)

Date: 7/7/22
Place:

BSS Singh

(Completion of summer internship from respective organization)

The certificate is awarded is to

Name: Dr AARUSHI KHOSLA

In recognition of having successfully completed her
Internship in the department of public health

Title: TOBACCO – RISK FACTOR IN HYPERTENSION AMONG URBAN
POPULATION OF SOUTHWEST REGION OF DWARKA

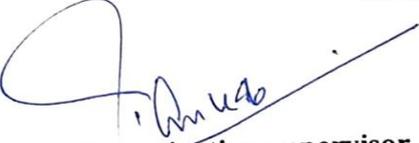
And has successfully completed her project

Date: 17 June 2022

Organisation: IIMR, DELHI

She comes across as a committed, sincere & diligent person who has a strong drive & zeal for
learning

We wish him/her all the best for future endeavours


Organization supervisor


Head- HR/Department Head

FEEDBACK FORM

(IIMR MENTOR)

Name of the Student: DR. AARUSHI KUDSHLA

Summer Internship Institution: ICMR PROJECT BY IIMR DELHI

Area of Summer Internship: URBAN POOR AREA OF DELHI
GOYLA VIHAR

Attendance: 100%

Objectives met: YES

Deliverables: → Field Visits
→ Interaction with community

Strengths: → Dedicated
→ Hardworking

Suggestions for Improvement:
Fine Tuning the
confidence level

Signature of the Officer-in-Charge (Internship)

Date: June 14, 2022

Place: DELHI

ACKNOWLEDGEMENTS

A summer training is a golden opportunity for learning and self-development. I consider myself fortunate for have been provided with this opportunity to learn and grow under project by **INDIAN COUNCIL OF MEDICAL RESEARCH (ICMR-DELHI) in collaboration with IIHMR DELHI.**

I would like to take this opportunity to express my deep sense of gratitude to all those people without whom this project could never have been completed. First and foremost, I would like to thank **Mr B.S Singh, Principal investigator of project & Associate professor at IIHMR-DELHI** who in spite of being busy with duties gave constant guidance and valuable comments throughout the project

My sincere thanks to **Dr Pankaj Talreja** (mentor) for his continuous guidance and support throughout the project. His valuable inputs made this project possible

I would like to acknowledge Dr. Manika Khajuria for being constant support and kind assistance through this project

I would also like to thank my family and friends for being my constant support throughout this wonderful journey

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ABBREVIATIONS

ABBREVIATIONS	FULL FORM
ICMR	Indian council of medical research
WHO	World Health Organization
ESI	Employee state insurance
BP	Blood pressure
NTCP	National tobacco control programme
SBP	Systolic Blood pressure
DBP	Diastolic blood pressure
ST	Smokeless tobacco
HTN	Hypertension

PART A- OBSERVATIONAL LEARNING

➤ ABOUT ORGANISATION

• ICMR DELHI

The Indian Council of Medical Research (ICMR), New Delhi, the apex body in India for the formulation, coordination and promotion of biomedical research, is one of the oldest medical research bodies in the world. The Council's research priorities coincide with the National health priorities such as control and management of communicable diseases, fertility control, maternal and child health, control of nutritional disorders, developing alternative strategies for health care delivery, containment within safety limits of environmental and occupational health problems; research on major non-communicable diseases like cancer, cardiovascular diseases, blindness, diabetes, hypertension and other metabolic and haematological disorders; mental health research and drug research (including traditional remedies). All these efforts are undertaken with a view to reduce the total burden of disease and to promote health and well-being of the population.

With this view IIHMR Delhi took an initiative and in collaboration with ICMR DELHI started this project

• IIHMR DELHI

The International Institute of Health Management Research, New Delhi is part of the Society for Indian Institute of Health Management Research (IIHMR), which was established in October 1984 under the Societies Registration Act 1958.

✓ CORE VALUES

- Quality
- Accountability
- Trust
- Transparency

- Sharing knowledge and information

✓ **MISSION**

It is an institution dedicated to improvement in standards of health through better management of health care and related programs. It seeks to accomplish this through management research, training, consultation, and institutional networking in national and global perspective.



METHODOLOGY

STUDY DESIGN	MIXED STUDY (QUANTITATIVE AND QUALITATIVE)
STUDY AREA	GOYLA VIHAR (SOUTHWEST AREA) NEW DELHI
STUDY DURATION	02 MONTHS (18th APRIL 2022- 18th JUNE 2022)
STUDY POPULATION	MALES
SAMPLE SIZE	Total individuals- 312 (females : 192) (Males : 120)
SOURCE OF DATA	PRIMARY DATA
STUDY TOOL	QUESTIONNAIRE

➤ GENERAL FINDINGS

✚ Hypertension is associated with 2 types of risk factors i.e.

- Modifiable risk factor** ---
- 1) Tobacco and alcohol
 - 2) Physical inactivity
 - 3) Salt intake
 - 4) Stress
 - 5) Unhealthy diet

-Non Modifiable risk factors are Genetic, Sex, Ethnicity, and Age.

➤ STRENGTHS

- 1- Community was very friendly in terms of providing data and most of them were willing to change and maintain healthy lifestyle
- 2- They were very warm and humble while giving answers to our respective questions
- 3- Training helped us to get more accurate data
- 4- Using digital mode made easy to store accurate data provided by the people

➤ LIMITATIONS

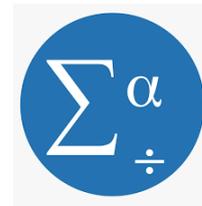
- 1- Due to time constraints , sample size was reduced
- 2- Weather conditions made difficult to reach out early
- 3- Most of the members were not available at time due to work
- 4- Male members were not available at morning time
- 5- Connectivity issue made it difficult to reach out each house
- 6- People were more interested in diabetes check-up

➤ CONCLUSIVE LEARNING

- Hypertension affects around one quarter of adult population, making it one of the most common conditions requiring diagnosis and management in primary care.
- Community interaction helped to know about the risk factors and need for implementation strategy.
- Various implementation strategies need to take out including stoppage of advertisements , awareness of hazards caused by tobacco , early detection of users need to be adopted.
- Male education about the tobacco needs to implemented and need of awareness camp is required

DIGITAL LEARNING INCLUDES

- a) KOBO DIGITAL APP
- b) MS EXCEL
- c) SPSS



PROJECT REPORT

• RATIONALE OF STUDY –

- Tobacco epidemic is the danger of growing the chance of cardiovascular grievance. Therefore tobacco is the predominant detail which wishes to be decreased to be able to lessen in addition cardiovascular certainly considered one among the largest public pitfalls the sector has ever confronted, with killing in addition greater than eight million humans round the sector. It is anticipated that in than million Indians are affected by hypertensive coronary heart conditions that contributed to over 0.thirteen million deaths in 2016. According to WHO document 2020 , Every time , 1.9 million humans die from tobacco-brought on coronary heart , it's also said that smokeless tobacco is chargeable for round 2 hundred 000 deaths from coronary coronary heart ailment in line with yr. E-cigarettes additionally enhance blood strain including conditions

• BACKGROUND

- Dwarka a one of the sub metropolis of south west Delhi. The metropolis has a place of 56.forty eight in sq. kilometers and its populace 1,2 hundred,000 making its Asia biggest sub –metropolis. Tobacco inflicting high blood pressure are one of the maximum regarding elements said in Delhi area. A current have a look at completed on ESI sufferers said that 58.eight% of men and women devour tobacco in smokeless shape. The have a look at said that 93.04% in men and (7%) in women (seventy nine.86%) of the tobacco customers in Out of which 92.85% in men and 7.15% in women observed through the smoke (28.eight %) shape have been conscious that ingesting tobacco reasons fitness associated problems. According to statistical studies branch it's far recorded that 17.eight% of Delhi populace are ingesting tobacco and has cardiovascular problems In India, deaths because of cardiovascular problems in men is 25% and in women it's far 20.eight%. As in line with NFHS-4, 2015-16, occurrence of high blood pressure for males and females are 14.eight% and 11% respectively however many are unaware they have got it due to the fact there aren't any caution signs, that's why it's known as the “ silent killer

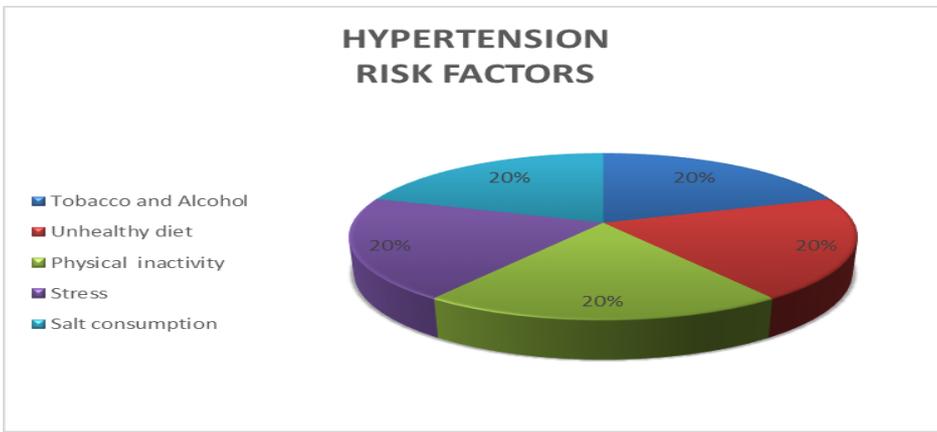
- **ABSTRACT**

Tobacco smoking is a major risk factor for cardiovascular disease and hypertension. The study presents consumption of tobacco in various forms by the people of southwest region of New Delhi. The main objective of this study was to find the consumption of tobacco in any form among the population and review the relevance of tobacco as a risk factor of hypertension. The literature was reviewed to identify the challenges faced and precautions to be taken while conducting the study. The data was recorded in the form of questionnaire which was taken on digital mode i.e. mobile application (Kobo) where all the parameters including demographic, diet, tobacco & alcohol, stress were recorded along with vital i.e. BP and anthropometric measurements such as Height, weight, waist and hip measurements were recorded. The collected data shows that total sample size of males were 120 wherein 34 were tobacco consumers and 86 were non tobacco consumers. Among 34 tobacco consumers 25 were hypertensive and 9 were non hypertensive which shows significant relationship between hypertension and tobacco and hence being one of the most important risk factor of hypertension.

- **INTRODUCTION**

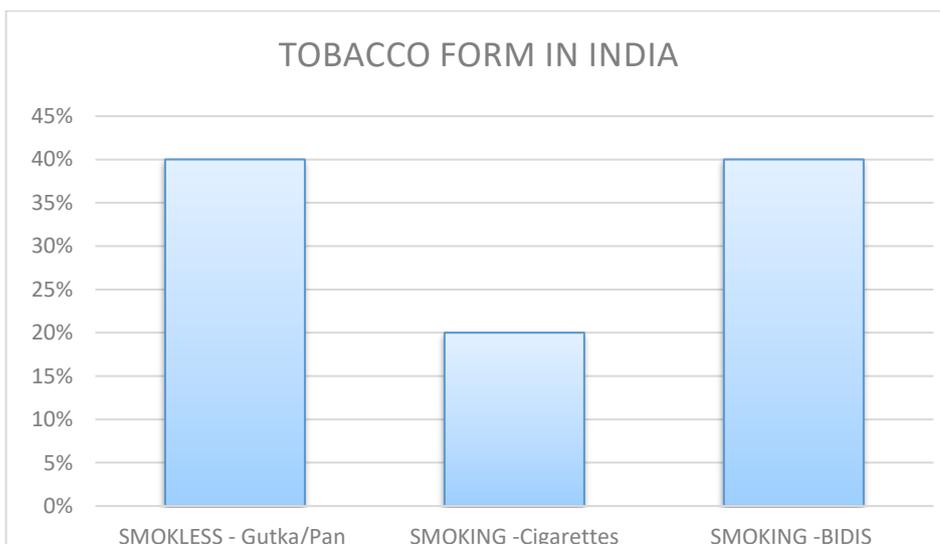
- Hypertension is a serious medical condition that significantly increases the pitfalls of heart, brain, kidney and other conditions. It is estimated that about 1.28 percent billions adults aged between 30-79 years in world have hypertension, where mostly (two-thirds) living in low- and middle-income countries, 46% of adults with hypertension are ignorant that they have the condition and lower than half of adults (42%) with hypertension are diagnosed and treated. Hypertension is a major cause of unreasonable death worldwide.

The major risk factors are;-



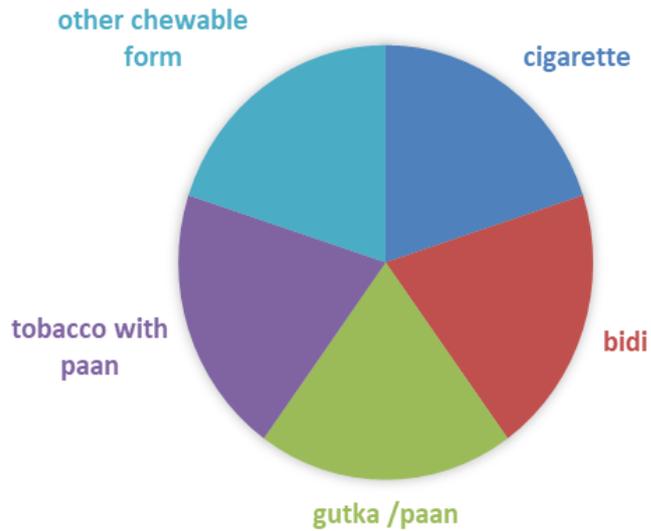
Tobacco in hypertension

Tobacco use in children and adolescents is reaching pandemic levels. The World Bank has reported that nearly 82,000–99,000 children and adolescents all over the world begin smoking every day about half of them would continue to smoke to adulthood and half of the adult smokers are expected to die prematurely due to smoking related diseases. India has been the second populous country in the world and the third largest producer and consumer of tobacco. Nicotine contained in tobacco is highly addictive and tobacco use is a major risk factor for cardiovascular and respiratory diseases. Tobacco is consumed in both smokeless and smoking form. Tobacco is consumed in the forms of **bidi** and cigarettes or by using devices like **hooka, dhumti, or chillum** whereas Tobacco is consumed in number of smokeless forms in India, which include **betel quid**, consuming **mishri, khaini, gutka**, and snuff, as an ingredient of **pan masala**. It is observed that the most common form of tobacco used in urban areas is CIGARETTES



When observed in Delhi it was reported that major 5 types of tobacco consumed are

FORMS OF TOBACCO



- **AIM OF STUDY**

- ✓ The aim of this study is to find the Association of tobacco as risk factor in hypertensive population in urban population of Goyla Vihar

- **OBJECTIVES OF STUDY**

- ✓ To study tobacco consumption in Goyla Vihar – southwest region of New -Delhi
- ✓ To study the association between tobacco consumption and hypertension
- ✓ To understand the types of tobacco products consumed in Goyla Vihar

REVIEW OF LITREATURE

1. Jeetendra Yadav , Shazia Allarakha ,Chander Shekhar , Ganesh Prasad Jena (Nov 2 , 2021) has done Discremental analysis on 15- 54 year old men using NFHS data 2015- 2016 . They have included 1, 12,122 males aged 15–54 from 1778 clusters (PSUs) in 640 districts of India in their study. The results came out as age group (15- 24) 6.2% people were hypertensive due to smoking, 5.3% were non-smokers. Age group (25-40) 17.1% were smokers and 5.3% people were non-smokers had hypertension .age group (41-49) 28.5% were smokers and 32.9% non-smokers had hypertension. They have concluded many factors affect the occurrence of hypertension, many of which are non-modifiable, such as age and gender. However, amongst the modifiable risk factors, alcohol and tobacco use are found as crucial determinants of hypertension in Indian men.
2. [Aashita Agarwal](#), [Lakshita Singh](#), [Mansi Atri](#), [Mayank Gupta](#),³ [Abhimanyu Sharma](#) and [Deepak Passi](#) (2020 Oct 30) has done cross-sectional study on to assess the prevalence of tobacco consumption among the ESI-insured patients. The study also assessed the knowledge, practice, and attitude among industrial workers as well as nicotine dependence with different forms of tobacco products consumed. The study was conducted for 3 months included 500 workers of which 470 were males and 30 were females. A predesigned, pretested, and structured interviewed administered questionnaire was used to collect the data on sociodemographic factors, reasons for tobacco consumed, and level of dependencies among industrial workers. Questionnaire also included questions related to awareness regarding health hazards and lesion present in the oral cavity as a result of tobacco consumption Nicotine dependence in the questionnaire was used which included six standard questions for both smokeless and smoked form. The result shows both males and females consumed tobacco in smokeless (58.8%) form. Out of which 92.85% in males and 7.15% in females followed by the smoke (28.8%) form. 93.04% in males and (7%) in females (79.86%) of the tobacco users in our study were aware that consuming tobacco causes health related problems. 38.6% of the users have moderate dependency in both smoke and smokeless form. Seventy six percent of the consumers feel that they didn't have any changes in the mouth by consuming tobacco and thus never thought of quitting tobacco.
3. [RK Chadda](#), [SN Sengupta](#) (2002 Jun 15) focusses on that Adolescents are the most vulnerable population to initiate tobacco use. This paper focuses on various tobacco products available in India, the extent of their use in adolescents, factors leading to initiation of their use, and the preventive strategies, which could be used to deal with this menace. The study populations have included school and college students, medical students and street children the prevalence of smoking has been found to vary from 6.9 to 22.5% among the male school and college students. Among the girls, the prevalence is considerably low varying from 0–2.3% [[6,11](#)]. In fact, tobacco use, especially smoking, is a relatively new habit among the female students, noticed only during the last 10–15 years. Tobacco use among medical students- Cigarette smoking has been found to be as common among medical students (17.6–33.2%) as among other college students They concluded with there is an urgent need to take effective steps, especially on launching community awareness programs for the school children and public to educate them about the consequences of tobacco use, and on assessing their effectiveness in curbing the problem.

4. [Md. Ashfikur Rahman](#),[Satyajit Kundu](#), [Bright Opoku Ahinkorah](#),⁴ [Joshua Okyere](#),⁵ [Henry Ratul Halder](#), [Md. Mahmudur Rahman](#),⁷ [Uday Narayan Yadav Sabuj Kanti Mistry](#) ,[Muhammad Aziz Rahman](#)(2021 Dec 20.) cross-sectional study was done to assess the changes in prevalence and associated factors of tobacco smoking among Bangladeshi adults over time. The study population included Adult population aged 15 and above. The results shows that he prevalence of tobacco smoking has declined over the period, it is still high among those who were relatively older, men, less educated and exposed to a movie/drama where tobacco smoking is promoted. Therefore, appropriate interventions are required to stop tobacco smoking among the Bangladeshi population.

5. [Rajeev Gupta](#) , [Nishant Gupta](#), [R S Khedar](#) (2013) stated that Smokeless tobacco use is high in countries of South and Southeast Asia, Africa and Northern Europe. Studies of smokeless tobacco users in Europe reported a relative risk for fatal coronary heart disease of 1.13 (confidence intervals 1.06-1.21) and fatal stroke of 1.40 (1.28-1.54) while in Asian countries it was 1.26 (1.12-1.40). Case-control studies reported significantly greater risk for acute coronary events in smokeless tobacco users (odds ratio 2.23, 1.41-3.52), which was lower than smokers (2.89, 2.11-3.96), and subjects who both chewed and smoked, had the greatest risk (4.09, 2.98-5.61). There is a greater prevalence of hypertension and metabolic syndrome in users of smokeless tobacco.

6. [Prashant Kumar Singh](#) , [Ritam Dubey](#) , [Lucky Singh](#) , [Nishikant Singh](#) , [Chandan Kumar](#) , [Shekhar Kashyap](#) , [Sankaran Venkata Subramanian](#) , [Shalini Singh](#) (March 2022) did a cross-sectional study to check the association between hypertension and tobacco, alcohol , smoking. The results showed that Women who smoked, and those who used any smokeless tobacco with a daily intake of alcohol had 71% (OR: 1.71, 95% CI: 1.14-2.56) and 51% (OR: 1.51, 95% CI: 1.25-1.82) higher probability of being hypertensive compared to the no-substance-users, respectively.

7. [Subhransu Sekhar Jena](#) , [Shobhitendu Kabi](#) , [Baikuntha Nath Panda](#) [B C Kameswari](#) , [Payal Ishwar Chandra Behera](#) [Subrat Kumar Tripathy](#) | [Seemanchana Mahanta](#) ⁶ (2016) did clinical epidemiological follow up To study the various clinical symptoms and radiological findings of stroke due to different types of ST. The result showed during a period of 2 years, a total of 54 patients were studied. Forty two (77.7%) were males and 12(22.3%) were females. The mean age at presentation was 42.72(± 8.6) years and among all 96.3% patients were diagnosed as ischemic stroke. Among ST, pan was most commonly used in 21(38.9%) patients with an average of 14.6(±3.27) years of addiction. It concluded with that smokeless tobacco is important risk factor of stroke and other cardiovascular diseases.

8. [Ruchika Gupta](#) , [Sanjay Gupta](#) [Shashi Sharma](#) , [Dhirendra N Sinha](#)³, [Ravi Mehrotra](#) (2020) did a systemic review on association between smokeless tobacco and cardiovascular diseases review included 50 studies - 23 on heart disease, 14 on stroke and 14 on HTN. 70 per cent of the studies on HTN were reported from South-East Asian Region and about half of the studies found a higher risk of HTN in SLT users.
9. [Giuseppe Lippi](#)¹, [Emmanuel J Favaloro](#)², [Tiziana Meschi](#)³, [Camilla Mattiuzzi](#)⁴, [Loris Borghi](#)³, [Gianfranco Cervellin](#) (2016) explained the association of E-cigarettes and cardiovascular risk . The study explained that e-cigarette is an independent factor for cardiovascular risk. Tobacco companies are now using aggressive marketing strategies in favour of smokeless tobacco, including electronic nicotine delivery systems, which are also known as electronic cigarettes or e-cigarettes. Recent studies have shown that various potentially harmful substances, especially nicotine, ultra-particles, and volatile organic compounds, may be effectively inhaled or liberated in exhaled air during repeated e-cigarette puffing. This would enhance the risk of cardiac arrhythmias and hypertension, which may predispose some users to increased risk of cardiovascular events, which may be further magnified by other potential adverse effects such as arrhythmias, increased respiratory, and flow respiratory resistance.
- 10- [Vivek K Mishra](#)¹, [Shobhit Srivastava](#)², [T Muhammad](#)³, [P V Murthy](#) (2022) explained the relationship between tobacco , alcohol consumption among women in India – by NFHS 2015-2016
The data were derived from the National Family Health Survey conducted in 2015-16. The effective sample size for the present paper was 699,686 women aged 15-49 years in India. Descriptive statistics along with bivariate analysis were conducted to find the preliminary results. It was revealed that 15.9% of women had any of the NCDs. A proportion of 0.8% of women smoked tobacco whereas 5.5% of women consumed smokeless tobacco. Also, a proportion of 1.2% of women consumed alcohol in the current study. The findings revealed that smoking and using smokeless tobacco and alcohol consumption were risk factors of NCDs in women.

ORGANIZATIONAL PLAN /METHODOLOGY

✓ MODE OF DATA COLLECTION – Questionnaire

- 1- NAME OF RESPONDENT
- 2- SEX OF RESPONDENT
- 3- ADDRESS OF HOUSEHOLD

4 Tobacco			
No	Questions and Filters	Coding Categories	
2.1	Do you currently smoke cigarettes every day, some days, or not at all?	Every Day Some Day Not at All	
2.2	On average, how many cigarettes do you currently smoke each day?	CIGARETTES _____	
2.3	For how long have you been smoking cigarettes regularly?	Weeks _____ Months _____ Years _____ Never Smoked Regular	
2.4	Do you currently smoke bidis every day, some days, or not at all?	Every Day Some Day Not at All	
2.5	On average, how many bidis do you currently smoke each day?	Bidis _____	
2.6	For how long have you been smoking bidis regularly?	Weeks _____ Months _____ Years _____ Never Smoked Regular	
2.7	Do you currently smoke or use tobacco in any other form?	Yes No.....	
2.8	In what other form do you currently smoke or use tobacco? Any other form?	Cigar Pipe Hookah..... Gutka/Pan Masala With Tobacco... Khaini Pan with Tobacco Other Chewing Tobacco Snuff Other (Specify)	
2.9	How often do you use smokeless tobacco: almost every day, about Once a week or less than once a week	Almost Every Day About Once a Week Less than Once a Week	

2.10	For how long have you been using smokeless tobacco regularly?	Weeks _____ Months _____ Years _____ Never Smoked Regular	
2.11	During the last 12 months, have you ever tried to stop smoking or using tobacco in any other form?	Yes No.....	
2.12	In the last 12 months, have you visited a doctor or other health care provider?	Yes No.....	
2.13	During any of these visits, were you advised to quit smoking or using tobacco in any other form?	Yes No.....	
2.14	In the last 30 days, did someone (other than you) smoke in your home or anywhere else when you were present?	Yes No.....	

✓ **Anthropometric Measurements**

- Calculation of BP , height , weight and BMI (Body Mass Index) using Omron blood pressure monitoring machine , Omron Automatic digital weight measuring scale Stadiometer for measuring height and freeman’s measuring tape for BMI

• **Study design**

- Cross sectional study design includes Qualitative and Quantitative methods

• **Study Population**

All males who were part of 1st PSU under (ASHA – Kavita sharma) in GOYLA VIHAR i.e. in southwest part of Dwarka city, New Delhi

- **Selection criteria**

- ✓ **Inclusion criteria –**

- All males above 15 years

- ✓ **Exclusion criteria –**

- Unavailable members of family
 - People who are unwilling to participate
 - Children below 15 years of age
 - Females above 15yrs of selected area

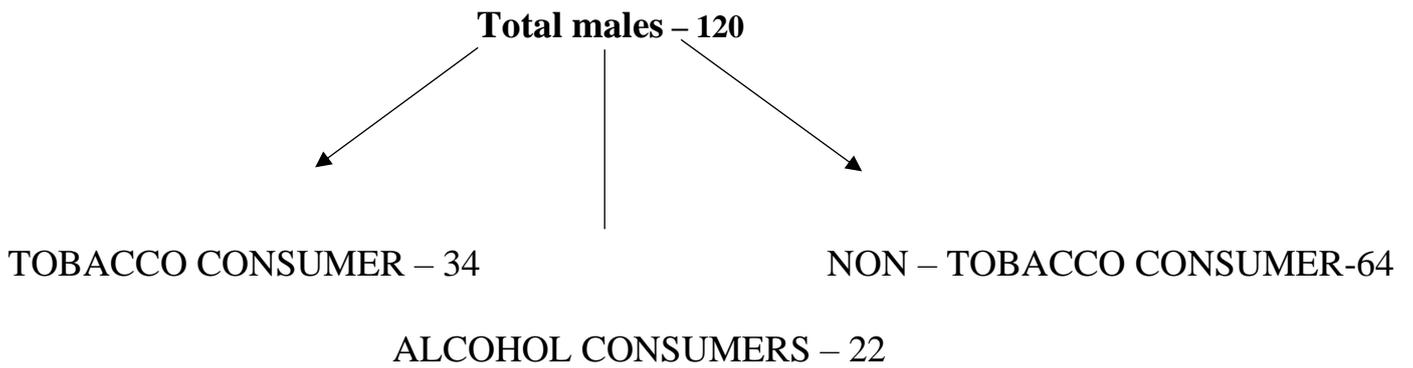
- **Sampling Method**

- ✓ The type of sampling method used was PURPOSIVE SAMPLING

- **Data analysis**

- ✓ Was done using SPSS , MS EXCEL
 - ✓ https://www.medcalc.org/calc/odds_ratio.php

RESULTS



✓ INTERPRETATION OF HYPERTENSION

	SBP	DBP
NORMOTENSIVE	<140	<90
MILD- HTN	140-180	90-105
BORDERLINE HTN	140-160	90-95
MODERATE – SEVERE HTN	>180	>105
ISOLATED HTN	>140	<90

✓ DISTRIBUTION OF PEOPLE AMONG TOBACCO AND HYPERTENSION

	HYPERTENSIVE	NON – HYPERTENSIVE
TOBACCO CONSUMER	25	9
NON-TOBACCO CONSUMER	38	26

After calculating by ODDS RATIO

		Outcome	
		Yes	No
Predictor	Yes	A	B
	No	C	D

$$OR = \frac{(A \cdot D)}{(B \cdot C)}$$

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Odds ratio 1.9006

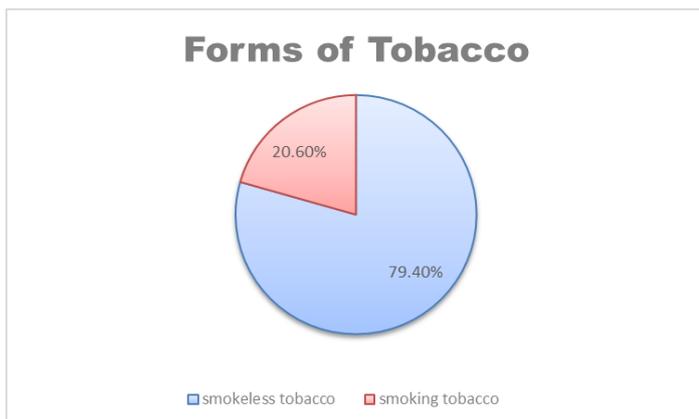
✓ Interpretation –

- 1- If odds ratio is =1 then it shows that exposure does not affect the odd
- 2- If odds ratio is <1 then it shows that it is highly significant
- 3- If odds ratio is >1 then exposure affects less significantly

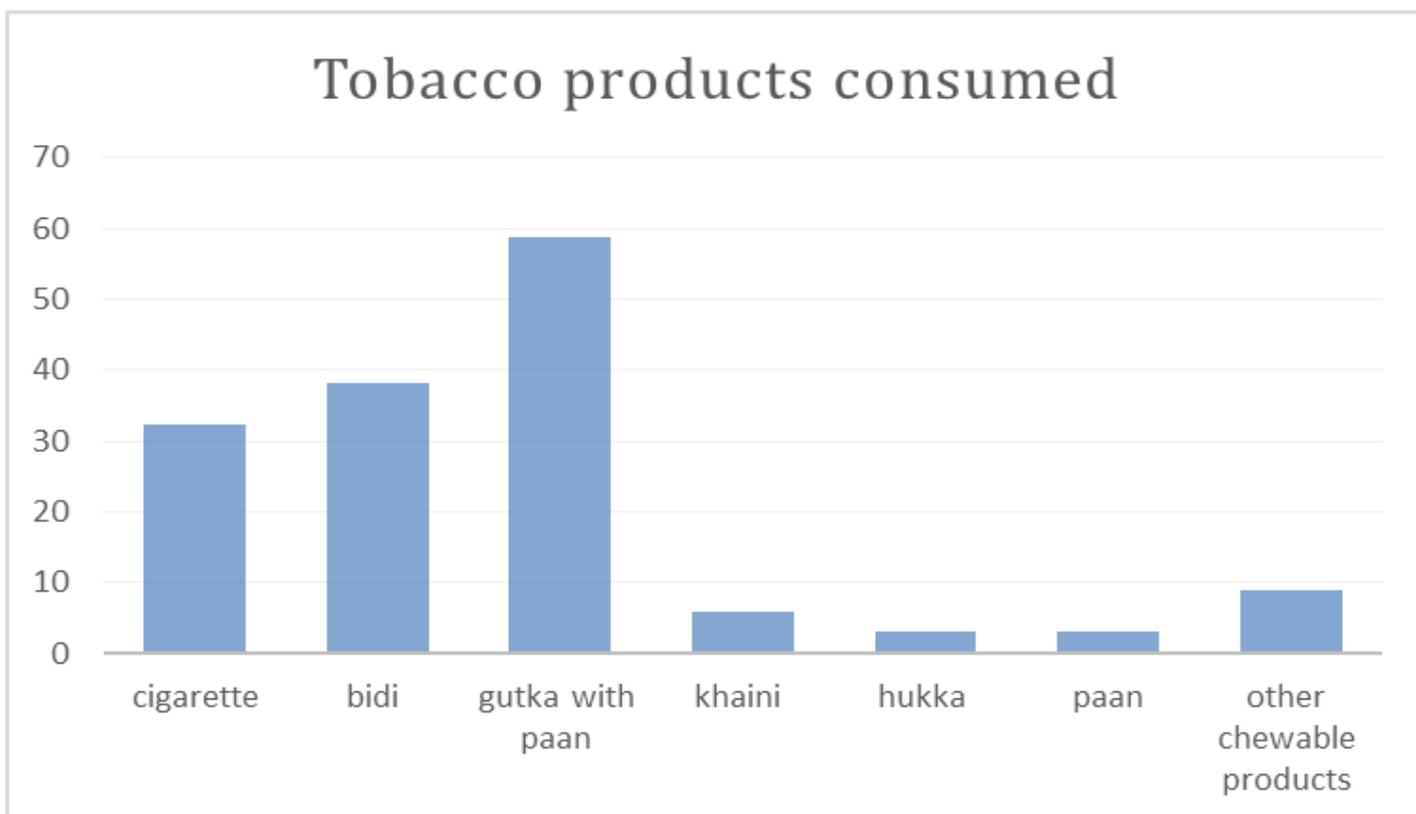
✚ Since the interpretation is 1.9006 it shows it's highly significant that there is an association between tobacco and hypertension.

✓ TOBACCO PRODUCTS CONSUMED

- It was seen that smokeless form of tobacco was consumed more than smoking form -



- Results showed that gutka with paan was consumed in high rate followed by bidi and cigarette



- **ANALYSIS**

- 1) It was observed that tobacco has been major risk factor in hypertension.
- 2) People consumes more of smokeless forms than smoking form.
- 3) Most common form of tobacco consumed is Gutka with Paan - 58.82%
- 4) Other common form of tobacco consumed is bidi - 38.23% , cigarette – 32.35% , Khaini – 5.8% , other chewable products -8.82% , Hukka and Paan with – 2.94%

- **RECOMMENDATIONS**

- 1- Health awareness camps to be organized
- 2- ASHA need to be trained for digital mode
- 3- Male education and awareness should be made at top-most priority
- 4- Prior information should be given about the survey, to get more accurate data and availability of people
- 5- Diabetes monitoring should be included along with other vitals

- **REFERENCES**

- ✓ <https://pubmed.ncbi.nlm.nih.gov/>
- ✓ [https://cegh.net/article/S2213-3984\(21\)00202-5/fulltext](https://cegh.net/article/S2213-3984(21)00202-5/fulltext)
- ✓ <https://www.who.int/>
- ✓ <https://scholar.google.com/>
- ✓ <https://www.ahajournals.org/doi/10.1161/HYPERTENSIONAHA.120.15026>
- ✓ <https://reference.medscape.com/viewarticle/931364>
- ✓ [• India - tobacco smoking rate by state 2017 | Statista](#)
- ✓ [Prevalence, knowledge, attitude and nicotine dependence among ESI-insured populations of Delhi NCR region:
Institutional study - PMC \(nih.gov\)](#)
- ✓ [Tobacco Use by Geographic Region | Smoking & Tobacco Use | CDC](#)
- ✓ [Tobacco use by Indian adolescents - PMC \(nih.gov\)](#)

