Internship Training
At

IQVIA Consulting and Information Services India Pvt Ltd

Risk Perception study of Tobacco Use among Adult Female Population in Connaught Place, New Delhi- A Cross-Sectional Study

By

Manish Bajaj

PG/21/145

Under the guidance of

Dr. Rohini Ruhil

PGDM (Hospital and Health Management),

2021-2023

International Institute of Health Management Research,

New Delhi

Internship Training
At

IQVIA Consulting and Information Services India Pvt Ltd

Risk Perception study of Tobacco Use among Adult Female Population in Connaught Place, New Delhi- A Cross-Sectional Study

By

Manish Bajaj

PG/21/145

Under the guidance of

Dr. Rohini Ruhil

PGDM (Hospital and Health Management),

2021-2023

International Institute of Health Management Research,
New Delhi

(Completion of Dissertation from respective organization)

The certificate is awarded to

MANISH BAJAJ

In recognition of having successfully completed his Internship in the department of

DISEASE MANAGEMENT AND HEALTH SYSTEMS

and has successfully completed his Project on

RISK PERCEPTION STUDY OF TOBACCO USE AMONG ADULT FEMALE POPULATION IN CONNAUGHT PLACE, NEW DELHI- A CROSS-SECTIONAL STUDY

15th May 2023

IQVIA Consulting and Information Services India Pvt Ltd

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

We wish him all the best for future endeavors.

Lakshya Sharma
Associate Consultant
Training & Development

Dr. Anshul Sharma
Zonal Head-Human Resources

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **MANISH BAJAJ** student of PGDM (Hospital & Health Management) from International Institute of Health Management Research, New Delhi has undergone internship training at **IQVIA Consulting and Information Services India Pvt Ltd** from **February 2023 to June 2023**.

The Candidate has successfully carried out the study designated to him during internship training and his/her approach to the study has been sincere, scientific and analytical. The Internship is in fulfillment of the course requirements.

I wish him all success in all his/her future endeavors.

Rohini 27/06/23

Dr. Sumesh Kumar
Associate Dean, Academic and Student Affairs
IIHMR, New Delhi

Dr. Rohini Ruhil
Assistant Professor
IIHMR, New Delhi

Certificate of Approval

The following dissertation titled **"RISK PERCEPTION STUDY OF TOBACCO USE AMONG ADULT FEMALE POPULATION IN CONNAUGHT PLACE, NEW DELHI- A CROSS-SECTIONAL STUDY"** at **"IQVIA Consulting and Information Services India Pvt Ltd"** 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 **PGDM (Hospital & Health 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
Dr. Sumesh Kumar	
Dr SHASHI BHUSHAN GOGA	
DR. PANKAJ TALREJA	

Certificate from Dissertation Advisory Committee

This is to certify that **Mr. Manish Bajaj,** a graduate student of the **PGDM (Hospital & Health Management)** has worked under our guidance and supervision. He is submitting this dissertation titled **"Risk Perception study of Tobacco Use among Adult Female Population in Connaught Place, New Delhi- A Cross-Sectional Study"** at **"IQVIA Consulting and Information Services India Pvt Ltd"** in partial fulfillment of the requirements for the award of the **PGDM (Hospital & Health 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.

Rohini
27/06/23

Dr. Rohini Ruhil
Associate Professor,
IIHMR Delhi

Kavya Sharma
Engagement Manager,
Disease Management & Health Systems
IQVIA Consulting and Information
Services India Pvt Ltd

INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH, NEW DELHI

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **Risk Perception study of Tobacco Use among Adult Female Population in Connaught Place, New Delhi- A Cross-Sectional Study** and submitted by **Manish Bajaj** Enrollment No. **PG/21/145** under the supervision of Dr. Rohini Ruhil (Assistant Professor) for award of PGDM (Hospital & Health Management) of the Institute carried out during the period from **February 2023 to June 2023** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

Signature

FEEDBACK FORM

Name of the Student: Mr. Manish Bajaj

Name of the Organisation in Which Dissertation Has Been Completed: IQVIAConsulting & Information Services India Pvt.Ltd.

Area of Dissertation: Public Health (Team- Disease Management & Health Systems)

Attendance: Satisfactory

Objectives achieved:

1. Improved on competencies like –
   - Project documentation
   - Secondary review
   - Power point presentation

2. Acquainted with the project delivery processes

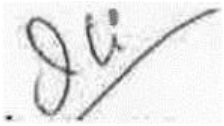
Deliverables:

- Assisted in three Projects
- Supported in developing project related documents like data collection tools,interim reports, modules etc.

Strengths: Smart and diligent, good team player.

Suggestions for Improvement: Work on improving skills on time management andreport writing.

Suggestions for Institute (course curriculum, industry interaction, placement, alumni):
N/A



Iti Kaushik
Consultant
Diseases management and Health Services
IQVIA Consulting & Information Services,
India Pvt. Ltd.

Acknowledgement

I received a fantastic opportunity for learning and professional growth during my dissertation with **IQVIA Consulting and Information Services India Pvt Ltd**. As a result, I view myself as a really fortunate person who was given the chance to join this **Diseases Management and Health Systems** team. Having the opportunity to meet so many lovely people and professionals who guided me through this internship time makes me grateful as well.

The **Consultant, Iti Kaushik**, who despite being incredibly busy with her tasks and obligations, took time out to bear, guide, and keep me on the right path by giving me responsibilities and letting me do them, deserves my sincere gratitude and special thanks.

I want to give **Dr. Kavya Sharma (Engagement Manager) ,** my sincere appreciation for helping me out whenever I needed it, as well as for providing the required guidance and counsel at every turn and setting up all the facilities to make life easier. I've decided to express my gratitude for her contribution right now. She is the person I have encountered at this time who has been the most uplifting and understanding.

I would like to express my sincere appreciation to the entire team of **Disease Management** and special thanks to **Lakshya Sharma** for their valuable guidance and assistance in helping me grasp project management from the outset, both of which were crucial to my studies both theoretically and practically.

Lastly, I would like to acknowledge **Dr. Rohini Ruhil** (Mentor, IIHMR Delhi) for her constant support and guidance throughout my journey at IIHMR. His belief in my abilities and willingness to listen at my problems have been a constant source of motivation.

Manish Bajaj

Table of Content

ABBREVIATIONS

- **GATS-** Global Adult Tobacco Survey
- **COTPA-** Cigarettes and Other Tobacco Products Act
- **NTCP-** National Tobacco Control Programme
- **WHO-** World Health Organization
- **ST-** Smokeless Product
- **p-** estimated prevalence
- **Z**- Desired confidence interval
- **D-** Allowable error
- S**RB**- Scientific Review Board
- **IRB-** Institutional Review Board
- **GPS-** Government and Public sector

List of tables

List of Figures

PART A

ORGANIZATION PROFILE

ABOUT IQVIA

Global Existence

IQVIA is a global leader in providing research and consulting in healthcare and life sciences sector

IQVIA is the world's leading provider of healthcare survey, consulting & health intelligence services with over **60 years** of experience. We operate in over **100 countries and serve over 5,000 healthcare customers across 6 continents**. IQVIA accommodate key healthcare organizations and decision makers around the world, spanning government agencies, donor agencies, policymakers, researchers, life science and healthcare companies, consumer health and medical device manufacturers, as well as distributors, providers, payers, and the financial community.

Our global data and analytics **capabilities draw on data from 100,000+ suppliers and on insights from more than 55 billion healthcare transactions** managed annually. We connect knowledge across all aspects of healthcare to help **more than 5,000 healthcare clients globally** to improve patient outcomes and operate more efficiently. The depth of experience available through IQVIA is well-recognized in the industry, as is the commitment to monitor and assess safety, benefit/risk, efficacy, consequenceiveness, quality of care and value.

Figure1.1 – Global insights about IQVIA

Our highly experienced teams from our global practices bring specialist skills and insights from large international mandates. Our team have worked on over 200 relevant projects globally and helped some of the world's largest organisations to deliver challenging programs and projects in the areas of healthcare and pharmaceuticals. Globally, all leading **private healthcare companies, government stakeholder and donor agencies** credence on insights provided by us for their business decisions.

Some of our major clients in comprise

Figure 1.2- Global Partners of IQVIA

IQVIA has significant experience in advising **Governments, international NGOs, multidimensional funding agencies in the emerging markets in areas ranging from strategic direction to program management, national health surveys, commodity assessment and mapping, program management, procurement and supply chain assessment, in country development, monitoring and evaluation, pharmaceutical market assessment, privatesector engagement, medicine access, policy and regulatory review, health data analytics etc.**

Our partnership with leading academia and international organizations supports their work.

By providing **information and data** to researchers.

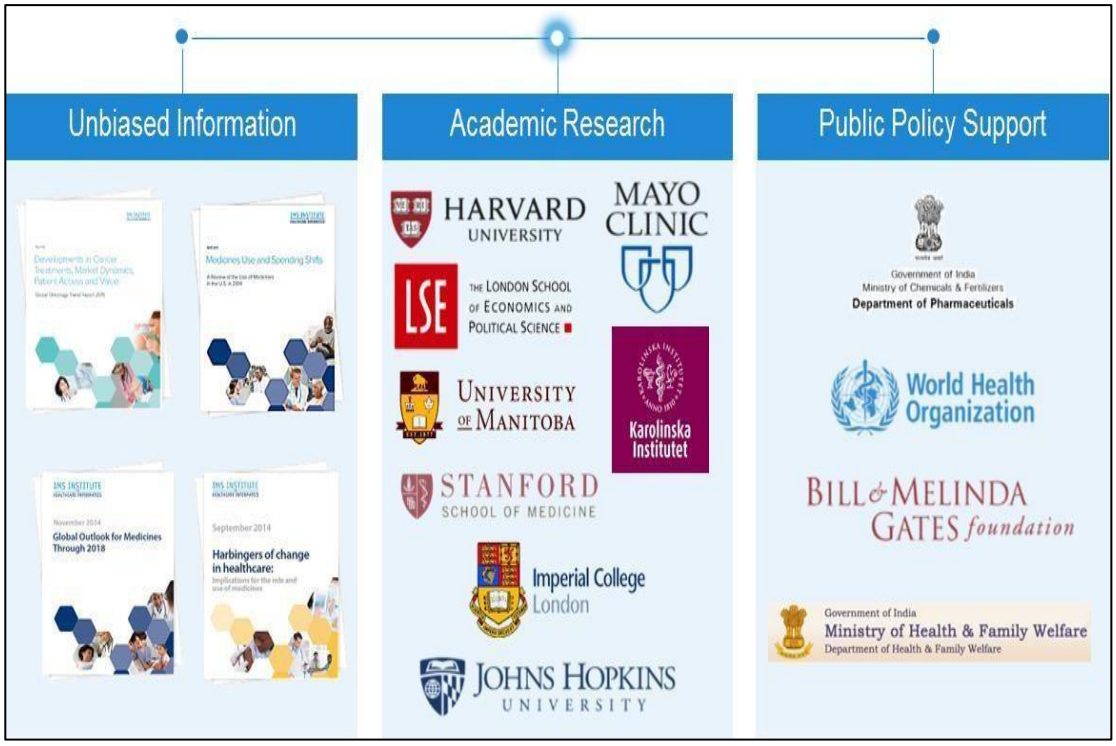


Figure 1.3 – Information Providers

IQVIA India

In India, we have over 13 years of experience and **a strong existence in the healthcare market across data, analytics and consulting services and is the "ONLY" integrated healthcare informatics player in India**, with solutions across healthcare sector value chain. IQVIA India has a deep heritage of providing best-in-class market intelligence to the healthcare industry stakeholders. Our range of services comprises **business strategy, market research, and performance tracking tools, global market insights, regulatory policy support, operations improvement and allied technology solutions.**

We have offices in **Gurgaon, Mumbai, Delhi and Bangalore** with total employee strength of over **3,000.** Our existing data assets and customized large data collection

activities are extensively used by our **clients in the public, private and non-for-profit sector on regular basis along with our analytics and consulting service providing.**

Our existing data assets encompasses of detailed information on **3 lac Doctors, 1 lac chemist, 25 thousand hospitals, 22 thousand drugs stockiest.** Our team also captures over 8 lac live transcriptions from approx. **5thousand empanelled doctors** and **drug sales information from over 5 thousand stockiest monthly.** Our field and project teams have experience of working across **50 cities** in India with **state government, NGOs and international funding agencies.**

We have a strong focus on the **Government and Public sector (GPS) in India.** Our Public Health Government Practice in India works with the key **Central Ministries, State Governments and International Donor Agencies** across India on significantly large mandates in various areas of **Health Policy & Strategic Planning, Health financing, Quality Assurance and Improvement in Health Facilities, Health and Hospital Information Systems by IT solutions, Public Private Partnerships and Monitoring & Evaluation, drug procurement and supply chain system etc.**

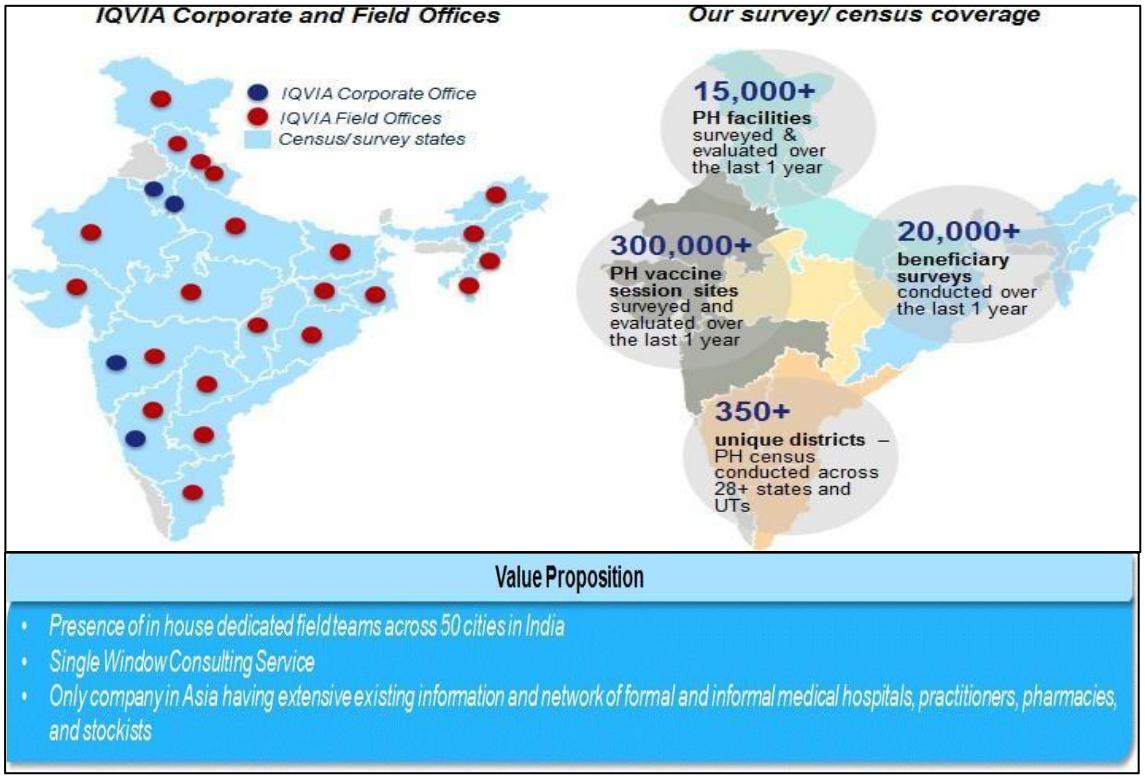


Figure 1.4- Value Proposition

We have prior experience of working on projects funded by government and international donor agencies including **The World Bank, UNDP, CHAI, JSI, USAID Deliver, NPPA, DoP, Niti Aayog, PSI, BMGF, DFID, Pharmexcil, Tata Trusts, and Micronutrient Initiative etc.**

Some of our major clients comprise:

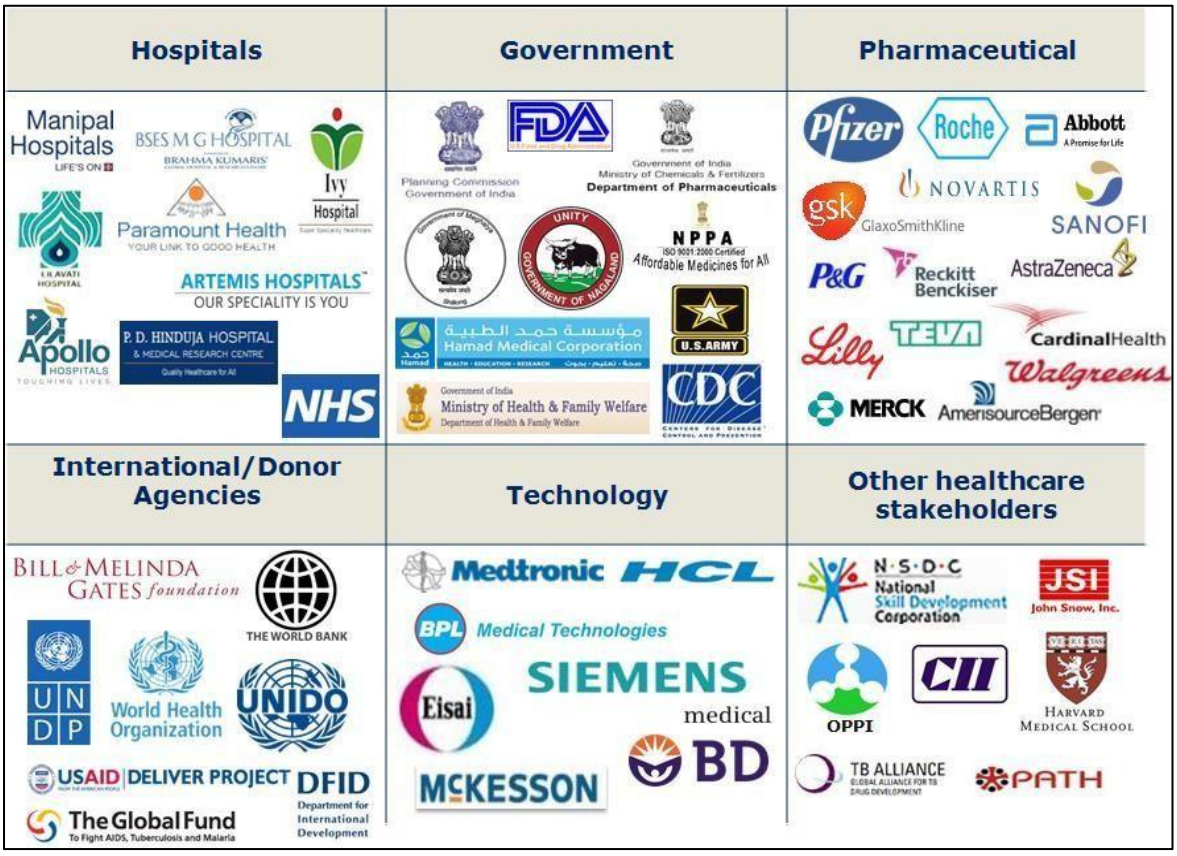


Figure 1.5 – Projects worked

Our Core Services

We have accumulated in-depth knowledge of the **India health system and policy trends** through the extensive interaction with **health system stakeholders, as well as, work in areas of public health.**

We have worked extensively in the arena of Healthcare policy and established thought leadership on **policy trends by leveraging broad connections with stakeholders from key government divisions and healthcare institutions.** We are currently collaborating with **Department of Pharmaceuticals, India on Pharmaceutical pricing policy**

initiatives.

In **2013, the IQVIA India Institute and OPPI (Organization of Pharmaceutical Producers of India)** jointly produced a thought leadership study on "Understanding Healthcare Access in India" as a knowledge initiative in collaboration with government policy makers, industry and academics. This provided an opportunity for multi-sector stakeholders to exchange thinking on key issues in the **Health Care Access including affordability and quality of care, and to stimulate discussions on policy options.**

Quality Assurance

- IQVIA Public Health provider consulting team has senior professionals from industry who are certified as **Principal Assessor** for **National Accreditation Board for Hospital [NABH]** and have achieved the **distinction of Certification and Lead Auditor for ISO 9000 Quality Systems.**
- **Global experience in evaluating health systems performance and providing policy recommendations:** As a global team covering all major markets, we have extensive experience working on **health-related topics and providing solutions to public health organizations** and local governments and can share best practices from emerging and **developed markets across the globe.**
- **Performance Improvement**: for healthcare service providers IQVIA offers a range of **expertise** which encompass.
- **Supply Chain Management:** IQVIA Public Health assists clients understand their

existing **material use and purchase patterns, inventory management and vendor management practices.** This helps the client assess its annual needs for various **day to day material and medicine requirements.** Upon identifying the key drivers of inefficiency in a client's overall **procurement and supply chain system** the IQVIA team assists clients in implementing mechanisms such as **rationalization of SKUs (Stock Keeping Units)** to optimize inventory levels; **Procurement mechanisms such as tendering, bid process management and vendor management.**

- **Total Performance Improvement:** IQVIA Public Health helps clients achieve their desired performance through its **Total Performance improvement plan** which helps clients enhance revenues and optimize costs.
- **Process Optimization:** Inefficient service delivery processes can **lead to higher patient waiting times as well as lack of adequate personnel at peak operations** which leads to higher operation burdens for the providers as well as lower patient satisfaction. Healthcare providers seeking insights regarding their **service delivery processes can undergo business process re-engineering mechanisms to streamline their operations consequenceively.** IQVIA helps clients implement mechanisms across facilities **planning, operations and maintenance as well as contract management mechanisms such as PPPs etc.**
- **Other Services:** IQVIA Public Health's other services comprise improving utilization of facilities such as **OT, OPD, Imaging services; Performance benchmarking; Designing & implementing clinical KPIs; Specialty COE design**

Program Management:

IQVIA Public Health helps clients with long term projects/programs by undertaking end- to-end project management.

- **Program Design:** Clients seeking help in creating a prospective project/program can approach IQVIA Public Health for advisory on mapping the entire project/program landscape and on a phase by phase implementation plan.
- **Program Implementation**: IQVIA Public Health can provide clients with full time support during the implementation of their project/program by deploying a team of experts as the Project/Program Management Unit.
- **Monitoring & Evaluation**: The progress can during a program/ project can deviate from its envisioned path if proper monitoring mechanisms are not in place. IQVIA can help clients with monitoring & evaluation services providing information on bottlenecks and their respective solutions for keeping a project on-track.
- **Infrastructure Advisory**: Clients envisioning to establish healthcare infrastructure can receive IQVIA's support across a range of activities which can help them make informed decisions
- **Gap Assessment Study**: IQVIA Public Health can provide clients with detailed gap assessments for infrastructure requirement when they are considering construction or upgradation of their infrastructure projects.
- **Feasibility Studies & Project Structuring**: The experts at IQVIA Public Health can advise clients on the feasibility of their vision, identifying key hurdles which need to be addressed by structuring a project consequenceively
- **Bid Process Management & PMC Support**: A consequenceively bid process management approach can help clients identify the right service providers while

maintaining transparency and fairness.

- **Institutional Strengthening & Capacity Building**: IQVIA can help clients develop public institutions' internal capacity by upgrading existing personnel's skill sets. IQVIA's services encompass:
- **Capacity assessment**: Designing "To-Be" roles and conducting a skill gap assessment of the skill set and expertise of existing personnel
- **Organization Restructuring & Capacity Building**: Preparation of new organization chart, job descriptions, roles and responsibilities, KPIs and recruitment strategy for additional manpower
- **Implementation Support**: Designing detailed work plan, organisation and facilitation of workshops and training sessions, assisting the management identify HR services vendors Strengthening public institutions through training delivery for existing personnel and creating a monitoring & evaluation mechanism for the training provided to personnel

Dedicated Supply Chain Practice with Specialists in Public Health Supply Chain

IQVIA has one of the largest public health practices with nearly a decade of service devoted to the public sector and an internal structure to support and enhance our services to Governments and multi-lateral funding agencies.

IQVIA Health has significant experience in advising Governments across the world in areas ranging from healthcare surveys to technology to transformational insights.

IQVIA Health India team has conducted multiple Public Health supply chain/logistics assessments South Asia and Africa markets in **supply chain related to gap/bottleneck**

analysis, strategy, Institutional review, organizational restructuring, manpower assessment, capacity building, review & documentation of policies/ SOPs/ manuals, etc.

Our practice comprises experts providing comprehensive advisory services to both **public and private sector clients and to all levels of government, legislative agencies, municipalities, nodal agencies, redevelopment agencies, NGOs, and public-sector corporations.**

The **key service providing's in are: -**

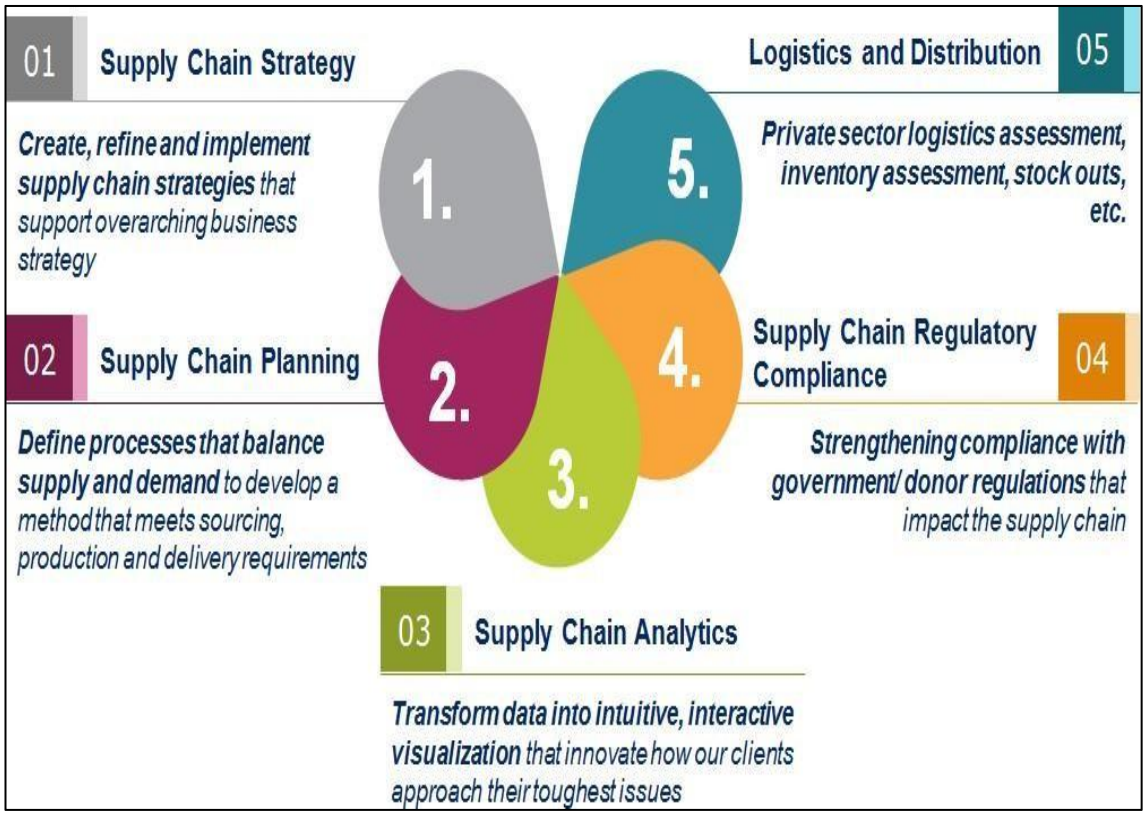


Figure 1.6 – Service Provoding's

Observation and Learning

During my internship at IQVIA consulting, I had the opportunity to work on two projects, one of which was the Lupin project. The objective of the Lupin project was to conduct a baseline study for non-communicable diseases (NCD) in four blocks of Alwar, Rajasthan.

In this project, my responsibilities included developing various research components such as reports, questionnaires, and tools for data collection. I was involved in obtaining Institutional Review Board (IRB) approval for the study and ensuring compliance with ethical guidelines. Additionally, I played a role in conducting field activities, including focus group discussions (FGDs) and surveys.

For data collection, I worked on designing and implementing both quantitative and qualitative questionnaires. This involved creating structured surveys for household interviews as well as developing FGD guides for discussions with community members. I also participated in the data cleaning and validation process, using Microsoft Excel for data manipulation and quality assurance.

Furthermore, I utilized statistical software such as Stata for data analysis, extracting meaningful insights from the collected data. I was also involved in creating a visually appealing and informative dashboard using Power BI to present key findings and trends to stakeholders.

Throughout the project, I actively monitored and supervised field assessors, ensuring data collection was conducted according to the study protocols. Additionally, I

conducted regular quality evaluations of the data through various quality checks, ensuring data accuracy and integrity.

One of the highlights of my experience was participating in fieldwork, where I personally conducted focus group discussions with community members. This allowed me to gain firsthand insights and perspectives from the participants, enriching the qualitative aspect of the study.

In summary, my internship at IQVIA consulting provided me with valuable experience in conducting a baseline study for NCDs in Alwar, Rajasthan. I contributed to various aspects of the project, including research design, data collection, analysis, and quality assurance.

In my second project, I was involved in developing e-modules for malaria elimination targeted at healthcare workers. The project aimed to provide comprehensive training and knowledge enhancement to healthcare professionals involved in malaria control and elimination efforts.

My role in the project encompassed gathering requirements from stakeholders to understand their needs and objectives. Based on these requirements, I collaborated with a team to develop the e-modules. This involved creating content, converting it into engaging presentations, and incorporating explanatory videos to ensure a thorough understanding of the topics.

To facilitate the delivery and accessibility of the e-modules, we utilized Moodle, a learning management system, and SCORM Hero software. These platforms allowed us

to convert the modules into interactive e-learning resources that could be easily accessed by healthcare workers. Additionally, we added voice-over narration to enhance the learning experience and provide audio support to complement the visual content.

To evaluate the effectiveness of the e-modules, we incorporated quizzes and assessments within the modules. These quizzes served as a means to assess the knowledge and understanding gained by healthcare workers after completing the modules. It provided a way to measure the impact of the training and identify areas that required further attention or reinforcement.

Overall, the opportunity to contribute to the development of e-learning modules for malaria elimination. I was involved in various stages of the project, including requirement gathering, content development, multimedia integration, and evaluation. This experience allowed me to enhance my skills in instructional design, e-learning development, and stakeholder management while supporting the important goal of malaria elimination among healthcare workers.

PART B

PROJECT REPORT

"Risk Perception Study of Tobacco Use among Adult Female Population in Connaught Place, New Delhi- A Cross-Sectional Study"

Introduction

The chance of dying from several diseases, including cancer, ischemic heart disease, chronic respiratory disorders, and stroke, is increased by smoking. Children under the age of 18 and within 100 yards of educational facilities cannot purchase tobacco products [1].

Over the past 20 years, the prevalence of smoking has been gradually dropping in wealthy countries while steadily rising in emerging nations. According to projections, the number of fatalities related to tobacco use will increase from 5.4 million in 2005 to 6.4 million in 2015 and 8.3 million in 2030, with 80 percent of these additional deaths taking place in developing countries [2].

Different types of tobacco are consumed in India. The two most popular ways to smoke tobacco are cigarettes and bidis, hand-rolled cigarettes made from raw tobacco. Misri, a black powder made by roasting and powdering tobacco, is the most widely used type of smokeless tobacco (ST). It is then applied to the gum using the fingers. Chewing betel quid, which consists of betel leaves, areca nuts, slaked lime, tobacco, and seasonings but can vary depending on personal choice, is one of the most popular forms of smokless tobacco [3].

The number of people who smoke has fallen globally over the past 20 years, from 1.397 billion in 2000 to 1.337 billion in 2018. All of the WHO's regions are experiencing a decline in age-standardized tobacco use prevalence rates [4]. Women are a desirable target for the tobacco business due to the significant percentage of non-smokers among them. The lack of basic knowledge regarding the negative effects of tobacco, common

smoke myths, and SLT products encourage their efforts to promote tobacco use [5]. Utilising tobacco increases exposure to a deadly cocktail of more than 7,000 harmful compounds, including at least 70 recognized carcinogens that can harm almost all of the body's organ systems [6].

Smoking more cigarettes increases your risk of death and disease, but even occasional smoking can have a big impact. Smoking in women increases the risk of various gender-specific disorders include cervical cancer, osteoporosis, impaired fertility, and early menopause in addition to raising the risk of the same diseases as in men. Women who smoke before and throughout pregnancy run a higher risk of preterm birth, irregular foetal growth, low birth weight, miscarriage, and foetal death [7].

According to Global Adult Tobacco Survey, the prevalence of smoking tobacco in females in Delhi accounts for 1.8%, and total tobacco prevalence including smoke and smokeless tobacco is 4.8%.

In the world, more than 50% of daily smokers continue to do so while pregnant [8]. A young age, a lower socioeconomic status, or a lesser level of education are all substantially connected with persistent smoking behaviour in pregnant women [9]. The smoke that is exhaled by the smoker as well as the smoke that is released from the burning end of a cigarette or other smoking devices (such bidis and water pipes) is referred to as second-hand tobacco smoke. There is no safe threshold of exposure to secondhand cigarette smoke because more than 4000 compounds have been found in tobacco smoke. There is no level of cigarette exposure that is safe; all kinds of tobacco are toxic. The most prevalent method of tobacco consumption worldwide is cigarette

smoking. Other tobacco goods include bidis, kreteks, cigars, cigarillos, roll-your-own tobacco, waterpipe tobacco, and numerous smokeless tobacco items [10].

Need/ Rationale of Study

The rationale of study is to contribute to the development of evidence based interventions that can help to reduce tobacco use by determinig the perception and related ill effects among women of Connaught place, New Delhi. Also to identify potential government regulated interventions for reducing tobacco smoking among the population.

Research Question

What is the level of risk perception of tobacco use among adult females in Connaught Place, New Delhi?

AIM

The aim of this study is "To study risk perception factors of tobacco use among adult female population in Connaught Place, New Delhi."

Objectives of Study

The objectives of the study are-

1. To explore the level of risk perception of tobacco use among adult females.
2. To understand the type of Tobacco products used in the study area
3. To identify the factors that influence the health attitudes and behaviors of adult females towards tobacco use.
4. To identify potential government interventions for reducing tobacco use among female population.

METHODOLOGY

Study Design and setting

A cross-sectional study was conducted through an online and offline survey from March 2023 to June 2023 among adult females in Connaught Place, New Delhi. Data was collected from parking lots, road side shops and smoking zone of restaurants and clubs in the area of Connaught Place, New Delhi.

Study Population

Study population was the adult females who are working or resident in the area of Connaught place, New Delhi.

Inclusion Criteria

Female population who are in age group of 18 years and above and who are residents or work in Connaught Place, New Delhi are included in the study.

Exclusion Criteria

All Males population and females who are not willing to participate are excluded from the study.

Sample Size

The study population for this research comprises adult females aged 18 years and above in Connaught Place, New Delhi. According to available data, the estimated population size of adult females in Connaught Place is approximately 5000. The prevalence of tobacco use among females in this population is reported to be 4.5%, based on the Global Adult Tobacco Survey fact sheet.

To determine an appropriate sample size for the study, a significance level of 95% and a

relative precision of 10% are considered. Using the formula N = Z^2 * p * q / d^2, where N represents the required sample size, Z is the Z-value corresponding to the desired confidence level, p is the estimated prevalence, q is 1-p, and d is the allowable error, the sample size is calculated as 70.

Also Considering other parameters for sample size, the calculated sample size for this study is determined to be 120 participants. This sample size is deemed sufficient to provide statistically significant results with an acceptable level of precision.

Sampling Technique

Stratified random sampling was employed to ensure representative sampling across different age groups and educational and occupational backgrounds. The selection of participants was carried out in two stages. In the first stage, Connaught Place was divided into strata based on age groups (e.g., 18-25, 26-35, 36-50 and above 50 years) and educational backgrounds (e.g., higher secondary, graduation and post graduation and above). A systematic random sampling technique was then applied to select participants from each stratum in proportion to the population distribution within that stratum.

Data collection tool

Three main components made up the semi-structured questionnaire: the first dealt with background variables or personal information; the second addressed smoking activity; and the third addressed judgements of the advantages and disadvantages of smoking. Pre-approved semi-structured questionnaire was used from previous study "Knowledge and Perception about Health Risks Associated with Tobacco Habit — A Survey"[11], for which Scientific Review Board approval was done from IIHMR Delhi and

questionnaire approval was done Saveetha Dental College and Hospitals, Chennai Institutional Review Board granted ethical permission for the survey, which was composed of 15 closed-ended questions and distributed online via Kobo Toolbox to gather data. To assist people for whom English is not a second language, the questionnaire was also developed in regional languages. We frequently reviewed the collected data for quality, consistency, and clarity. The questionnaire also contained demographic information.

Data Collection

The participant was informed of the study's goals prior to data collection using the anonymous, self-administered English version questionnaire that was utilised for data collection. They gave out a series of questionnaires to individuals present in the class who met the requirements for inclusion. A questionnaire was finished in about 10-15 minutes.

Ethical Considerations

Obtain ethical approval for the study from the Scientific Review Board (SRB) committee of IIHMR Delhi. All data collected was kept confidential and used for the purpose of this research only. The questionnaire have not contain any identifiers. A participant information sheet was circulated with the questionnaire. Returning of filled questionnaires was considered as consent to participate in the study.

Data Analysis

Quantitative data was analyzed using Microsoft Excel and expressed using frequency and percentage. Chi square test was used to test statistical significance. The confidence limit with 95 % CI was set to assess the proportion and hazard risks. P value < 0.05 was considered as statistically significant.

Result

Demographic characteristics

All the participants in the study were females of different age group as shown in table 3.1. The response rate in the sample was 115/120 (95.83%) as in figure 1, The majority of the participants (56, 48.70%) were of age group 26 to 35, and the participant of age group 18 to 25 were 47, 40.87% and minimum number of participants are 36 to 50 years age group which is 12, 10.43% and no participant are of 50 above age group in figure 3.1

	Age	N	%
Age	18-25	47	40.87%
	26-35	56	48.70%
	36-50	12	10.43%
	Above 50	0	0.00%

Table 3.1 Age wise number of participants

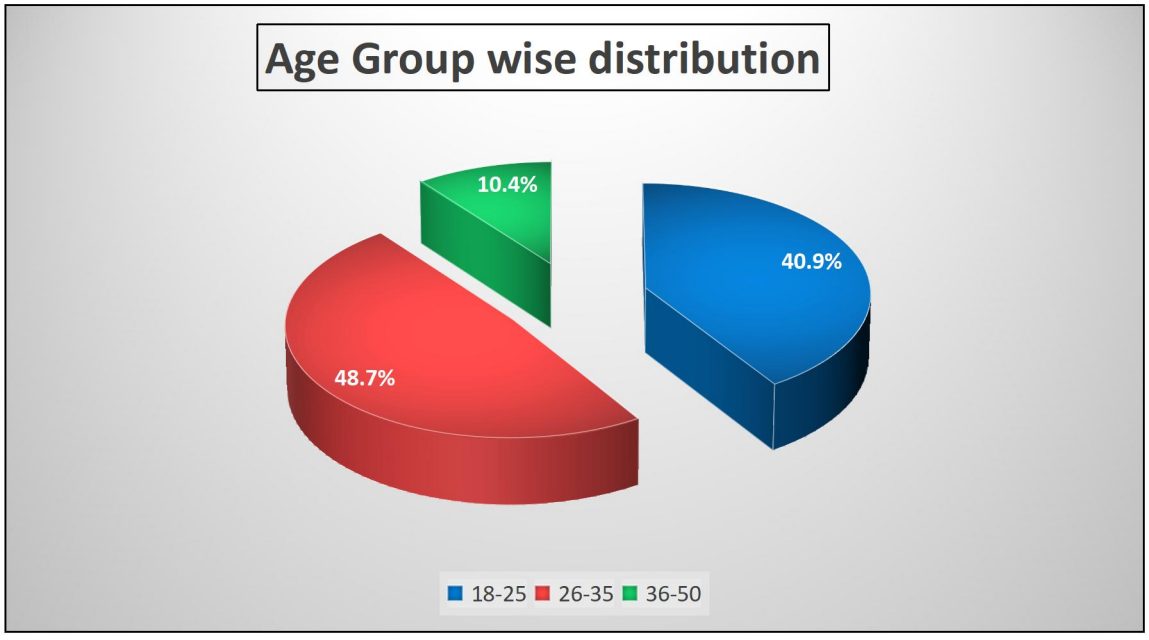


Figure 3.1 Age wise distribution of participants

According to the survey data, the educational attainment levels can be categorized into four groups: higher secondary, graduation, post-graduation and above, and no formal education. Among the surveyed adult female population population, (3, 2.61%) of individuals reported having completed their higher secondary education, also found that a significant (32, 27.83%) of individuals have successfully completed their graduation.

According to the survey data, the educational attainment levels can be categorized into four groups: higher secondary, graduation, post-graduation and above, and no formal education. Among the surveyed adult female population population, (3, 2.61%) of individuals reported having completed their higher secondary education, also found that a significant (32, 27.83%) of individuals have successfully completed their graduation.

Education status of participants are shown in table 3.2, a maximun number of participants are (80, 69.57%) of participants have attained post-graduation or higher levels of education, while participant pursuing or completed graduation are (32, 27.83%), and the minimum number of participants who are pursuing higher secondary education (3, 2.61%) and no participants are of no formal education from the survey shown in figure 3.2.

	Education	N	%
Education	Higher secondary	3	2.61%
	Graduation	32	27.83%
	Post -graduation n above	80	69.57%
	No formal education	0	0.00%

Table 3.2 Education wise distribution of participants

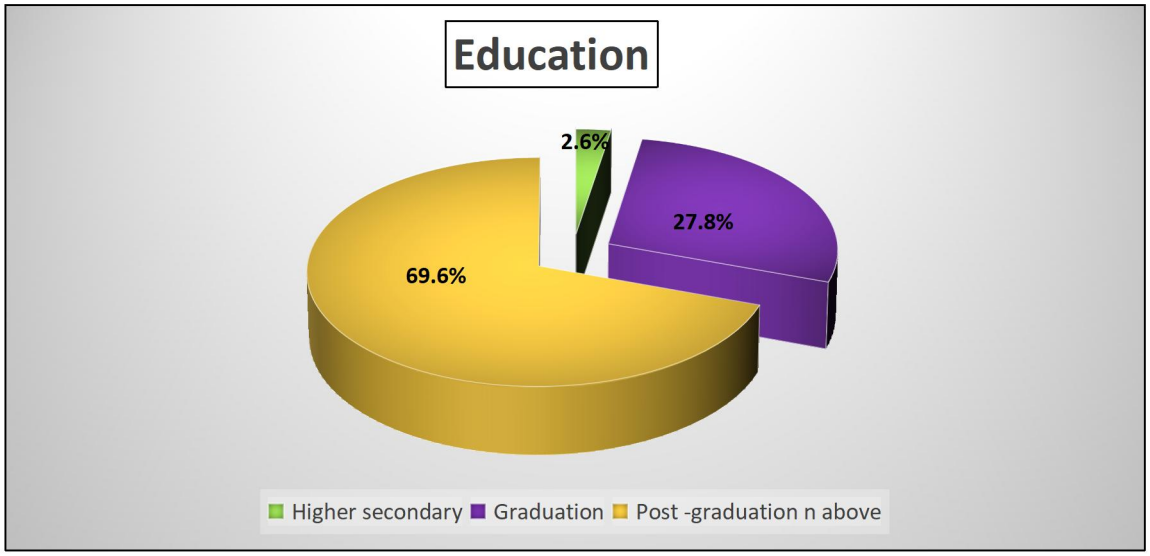


Figure 3.2 Education wise distribution of participants

As shown in Figure 3.3, understanding employment patterns within a community provides valuable insight into the distribution of jobs, which can be broken down into six categories: self-employed, government, private, students, housewives, and unemployed.

The survey shows that private sector employment is the largest category, with adult women (66, 57.39%) working in a variety of private sector jobs, including technology, public health and finance. Approximately (28, 24.35%) of the adult women surveyed identify themselves as students with a master's degree or degree. On the other hand, those who have civil servant jobs (7, 6.09%), those who identify as housewives (4, 3.48%), also provide information on self-employed and run their own companies (3 people, 2.61%) and finally those who are currently unemployed (7, 6.09%).

	Occupation	N	%
Occupation	Self owned	3	2.61%
	Government Job	7	6.09%
	Private Job	66	57.39%

	Student	28	24.35%
	Housewife	4	3.48%
	Unemployed	7	6.09%

Table 3.3 Occupation wise distribution of participants

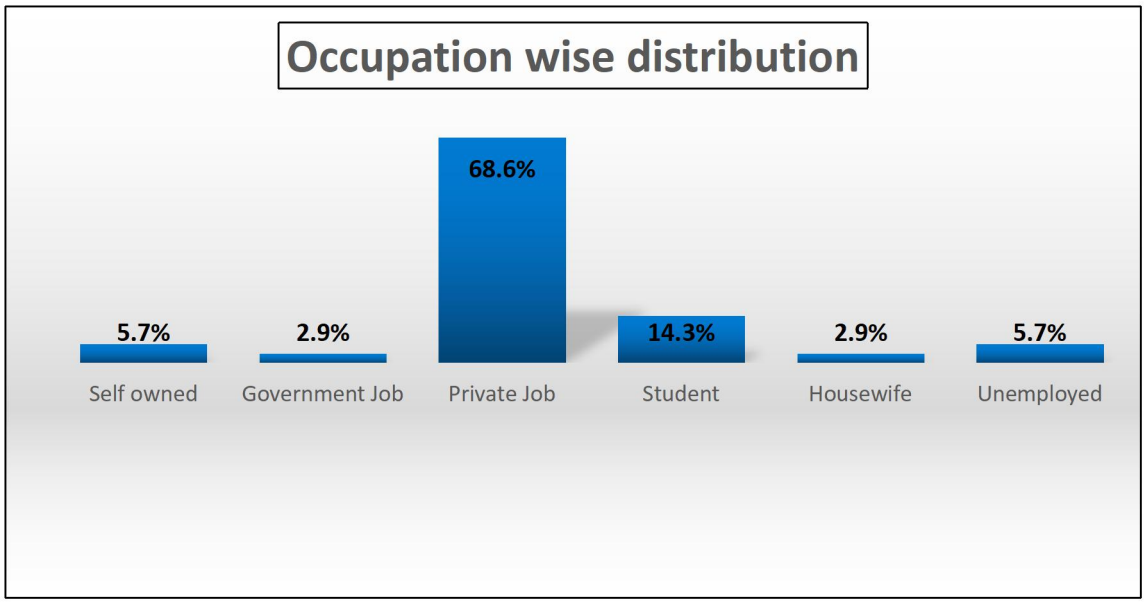


Figure 3.3 Occupation wise distribution of participants

Association of occupation with factor affecting smoking stress

It was found on the basis of given data, chi square test was done Chi-square test statistic: 11.167, Degrees of freedom: 5 and p-value: 0.0499

The p-value is 0.0499, which is less than the conventional significance level of 0.05 which signifies association between "Occupation" and "Stress" as a factor affecting smoking

Occupation	Factors Affecting smoking stress
Self owned	1
Government Job	0
Private Job	5

Student	2
Housewife	0
Unemployed	0

Table 3.4 Association of occupation and Stress as factor affecting smoking

Association of occupation and tobacco users with chi square

According to the data, chi-square test is done, and obtain the following results Chi-square test statistic: 44.000, Degrees of freedom: 5, p-value: 1.684e-08 (approximately 0.00000001684)

The p-value is extremely small, indicating strong evidence to reject the null hypothesis. This suggests that there is a significant association between "Occupation" and "Tobacco users" in the provided data.

Occupation	Tobacco users
Self owned	2
Government Job	1
Private Job	24
Student	5
Housewife	1
Unemployed	2

Table 3.5 Association of occupation and tobacco users

Knowledge about Tobacco and Tobacco Products

As shown in Table 3.4, we find that the majority of participants (99.13%) answered that they were knowledgeable about tobacco and tobacco products. This reflects a high level of awareness among research participants and understanding of the potential risks and health hazards associated with tobacco use.

Tobacco Use

Among the study participants, 30.43% reported currently using tobacco, while the remaining 69.57% did not engage in tobacco consumption. These findings shed light on the prevalence of tobacco use within the adult population. It is important to note that tobacco use poses significant health risks and is associated with various chronic diseases, including cardiovascular disorders, respiratory problems, and certain types of cancer. From the participants using the tobacco, all participants (100%) reported smoking tobacco as their preferred method of consumption, while none reported using smokeless tobacco. This suggests a predominant preference for smoking tobacco among the surveyed adult females.

		N	%
Know about tobacoo and tobacco products	Yes	114	99.13%
	No	1	0.87%
		N	**%**
Currently use tobacco	Yes	35	30.43%
	No	80	69.57%
		N	**%**
Type of tobacco use	Smoke tobacco	35	30.43%
	Smokeless tobacco	0	0.00%

Table 3.6 Awareness about tobacco and user

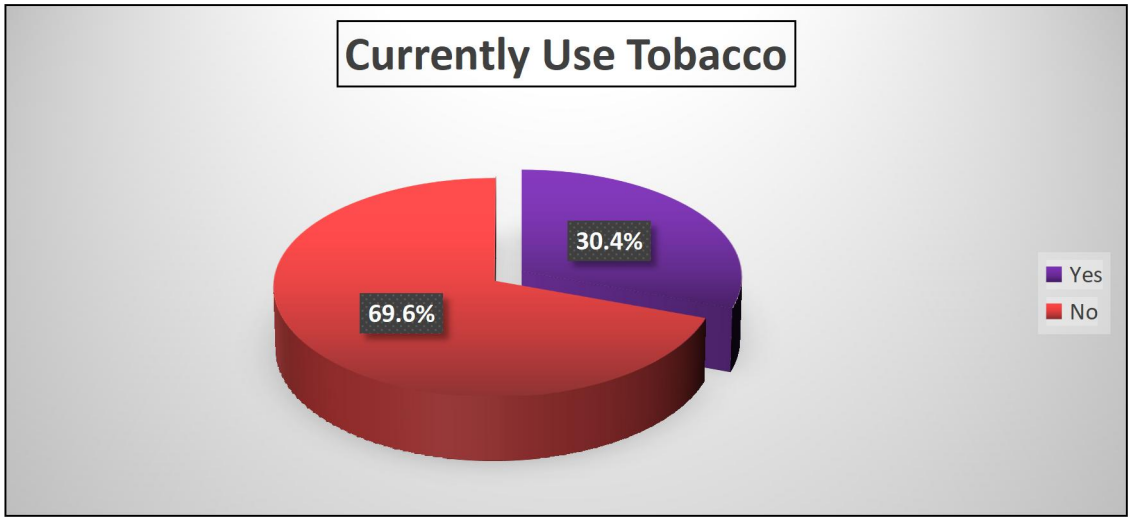


Figure 3.4 Currently use tobacco

Risk perception of age and awareness about smoking related diseases and secondhand smoking

The findings indicate a high level of awareness about the adverse effects of smoking on both lung and heart diseases across all age groups. Among the participants aged 18-25, 47 individuals (100%) reported being aware of the link between smoking and lung and heart diseases. Similarly, in the 26-35 age group, 55 individuals (98.21%) demonstrated awareness of this association. Among the participants aged 36-50, all 12 individuals (100%) acknowledged the connection between smoking and these diseases. Also indicates there is a strong awareness and understanding of the risks posed by smoking across all age groups in the study population.

In terms of awareness about passive smoking or secondhand smoking, the findings indicate relatively high levels of awareness across the different age groups. Among the participants aged 18-25, 42 individuals (89.36%) reported being aware of passive smoking. Similarly, in the 26-35 age group, 48 individuals (85.71%) demonstrated awareness of this issue. Among the participants aged 36-50, 10 individuals (83.33%) acknowledged the risks of passive smoking. These results also indicates a substantial

level of awareness about the potential harms of being exposed to secondhand smoke.

The high levels of awareness observed in our study suggest that the participants in the adult female population have a good understanding of the risks associated with smoking and passive smoking. This is an encouraging finding as it highlights the effectiveness of previous awareness campaigns, educational initiatives, and anti-smoking programs in disseminating information about the health hazards of tobacco use.

Age	18-25	26-35	36-50
Total respondent	47	56	12
Awareness about smoking leads to lung and heart diseases	47	55	12
Awareness about passive smoking or secondhand smoking	42	48	10

Table 3.7 Age related risk perception distribution

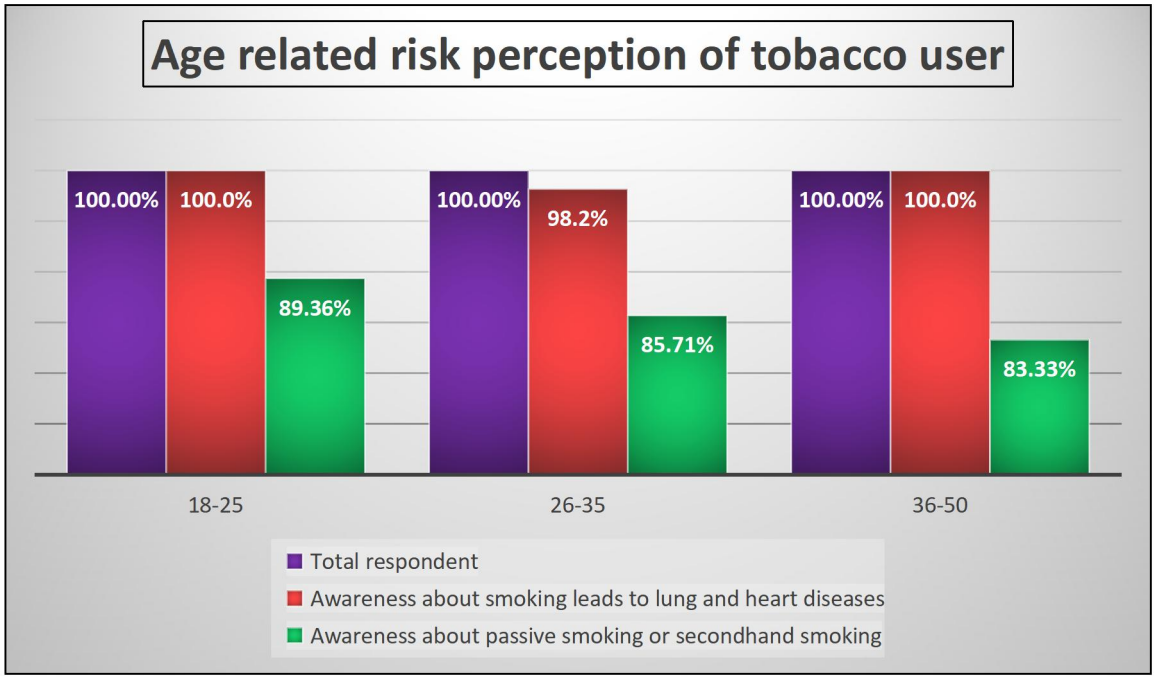


Figure 3.5 Age related risk awareness of tobacco user

Risk Perception of tobacco use

According to the data, it was found that among the participants aged 18-25, 40% individuals were identified as tobacco user and among these users, 50% reported that they had made attempts to stop using tobacco.

In the age group of 26-36, 48.6% participants were identified as tobacco users. Out of these individuals, 58.8% reported that they had tried to stop using tobacco.

Among the participants aged 36-50, 11.4% individuals were identified as tobacco users. Out of these users, 50% reported attempting to quit tobacco use.

Age	Tobacco users	Tried to stop
18-25	14	7
26-36	17	10
36-50	4	2

Table 3.7 Age wise distribution of risk perception of tobacco

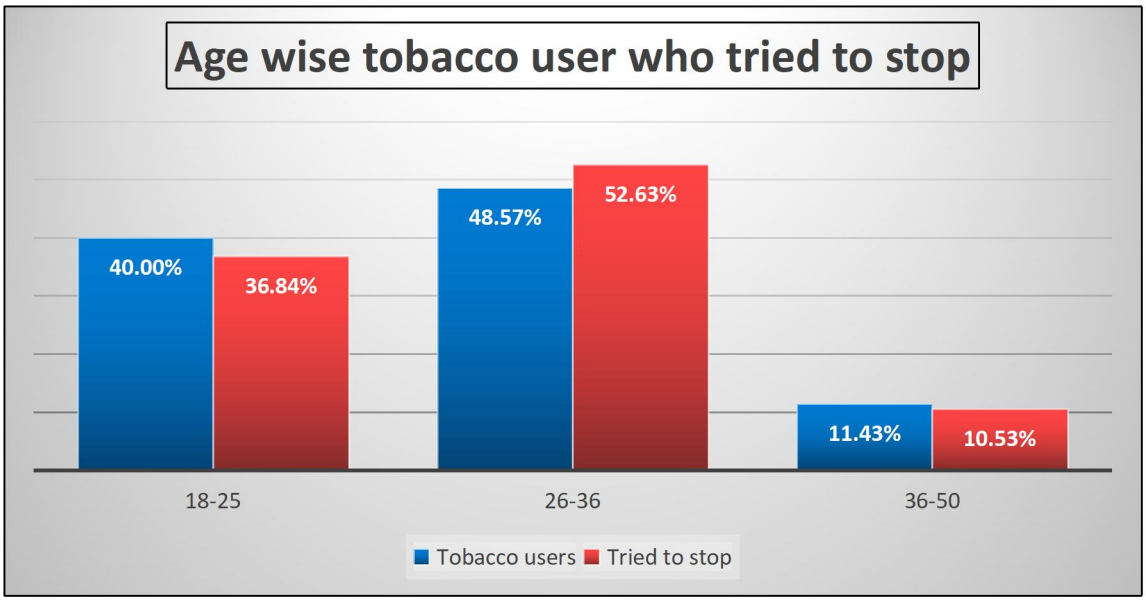


Figure 3.6 Age wise tobacco user and tries to stop

Perception of Smokeless Tobacco Compared to Cigarettes- A higher proportion of participants 57.39% believed that smokeless tobacco is less harmful and lethal than cigarettes, indicating a perception that smokeless tobacco poses a lower health risk. However, a significant number of participants 42.61% disagreed with this notion.

		N	%
Is smokeless tobacco less harmful and lethal than cigarettes?	Yes	66	57.39%
	No	49	42.61%

Table 3.8 Smokeless tobacco vs smoke tobacco

Frequency of Tobacco Use

The findings indicate that the frequency of tobacco use varies across different age groups. Among participants aged 18-25, 7 individuals (14.89%) reported using tobacco on a daily basis, while an equal number of individuals reported using tobacco on some days. None of the participants in this age group reported being unaware of their tobacco use habits. Among participants aged 26-35, 12 individuals (21.43%) reported using tobacco every day, while 4 individuals (7.14%) reported using it on some days. One participant (1.79%) in this age group reported being unsure about their tobacco use habits. Among participants aged 36-50, 2 individuals (16.67%) reported using tobacco every day, while another 2 individuals (16.67%) reported using it on some days. None of the participants in this age group reported being unsure about their tobacco use habits.

Age	18-25	26-35	36-50
Every day	7	12	2
Some days	7	4	2

Don't know	0	1	0

Table 3.9 Age vs frequency of tobacco

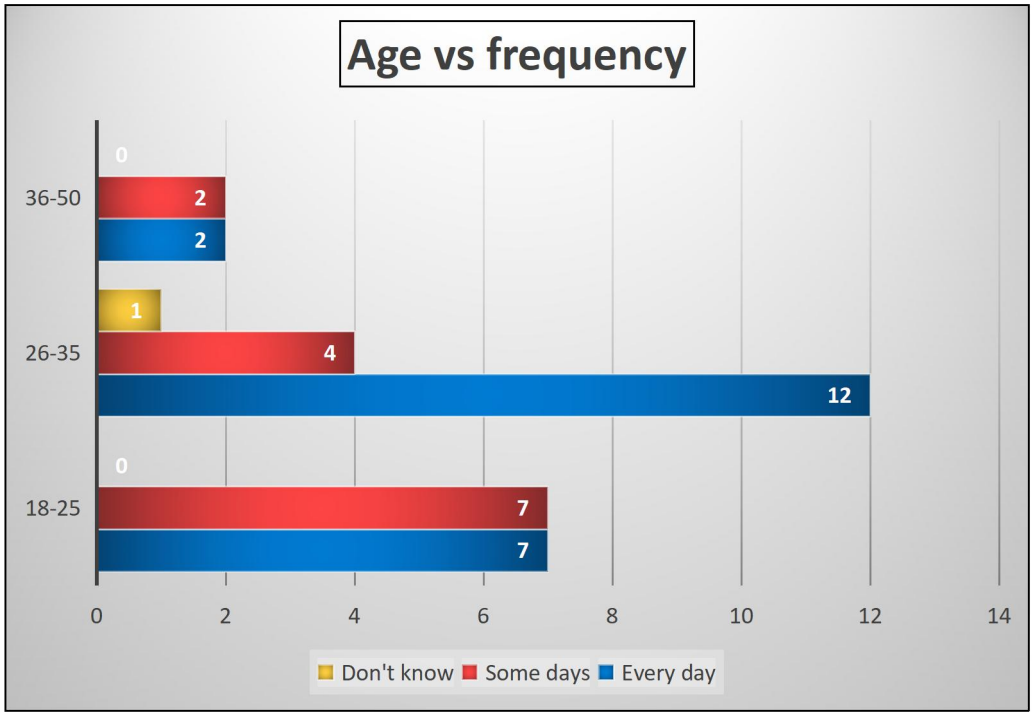


Figure 3.7 Age vs frequency of tobacco

Types of Products use in Connaught Place

According to the data, it is found that the frequency of tobacco use varies depending on the type of tobacco product. Among the participants, cigarettes were the most commonly used tobacco product, with 23 individuals (60.53%) reporting daily use. In comparison, 7 individuals (18.42%) reported using cigarettes on some days. It is important to note that only 1 participant (2.63%) expressed uncertainty regarding their cigarette use. This indicates a relatively high level of awareness and self-reported frequency among the study participants in relation to cigarette smoking.

Regarding the combination of cigarettes and hookah, 4 individuals (10.53%) reported using both tobacco products every day, while 3 individuals (7.89%) reported using them on some days. None of the participants expressed uncertainty regarding this pattern of

tobacco use. This suggests that a small proportion of the study participants engage in dual tobacco use, specifically with cigarettes and hookah.

Among the participants who reported using hookah, 2 individuals (5.26%) reported using it every day, while 3 individuals (7.89%) reported using it on some days. None of the participants were unsure about their hookah usage. These findings highlight that while hookah use is less prevalent than cigarette use, it is still practiced by a portion of the study population.

	Cigarette	Cigarette + Hookah	Hookah
Every day	15	4	2
Some days	7	3	3
Don't know	1	0	0

Table 3.10 Tobacco product vs frequency of tobacco

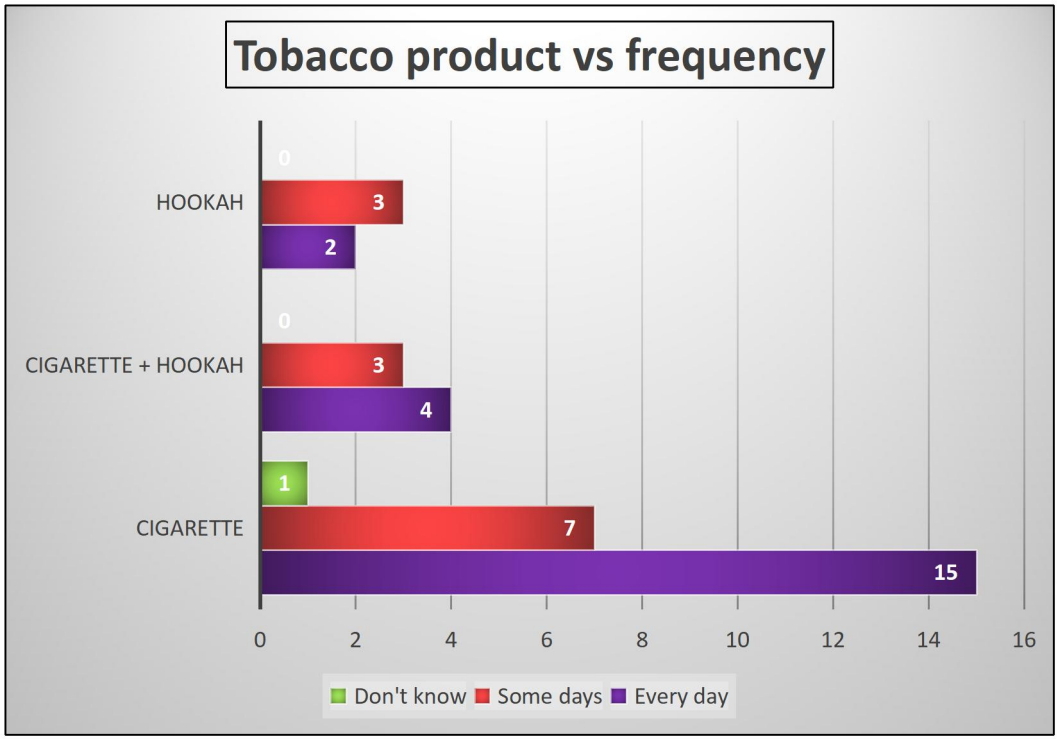


Figure 3.8 Type of products use by females

Quantity of Cigarettes Smoked per Day

Among the participants who reported smoking less than 5 cigarettes per day, 12 individuals (60%) reported smoking cigarettes every day, while 7 individuals (35%) reported smoking on some days. None of the participants were unsure about their cigarette consumption in this category. This indicates a relatively consistent and regular pattern of tobacco use among those who smoke fewer cigarettes per day.

In the category of smoking 5 to 10 cigarettes per day, 8 individuals (89%) reported smoking cigarettes every day, while only 1 individual (11%) reported smoking on some days. None of the participants were unsure about their cigarette consumption in this category. These findings suggest a high level of daily cigarette smoking among individuals who fall within this range of cigarette consumption.

Among those who reported smoking more than 10 cigarettes per day, only 1 individual (100%) reported smoking every day. None of the participants in this category were unsure about their cigarette consumption. It is important to note that the sample size in this category is relatively small, limiting the generalizability of these findings.

For participants who identified as occasional smokers, none of them reported smoking cigarettes every day. Instead, 5 individuals (83%) reported smoking on some days, and 1 individual (17%) was unsure about their cigarette consumption. These results suggest that occasional smokers engage in tobacco use less frequently compared to daily smokers.

	Every day	Some days	Don't know
Less than 5	12	7	0
5 to 10	8	1	0
More than 10	1	0	0
Occasional smoker	0	5	1

Table 3.11 Tobacco frequency vs quantity of tobacco

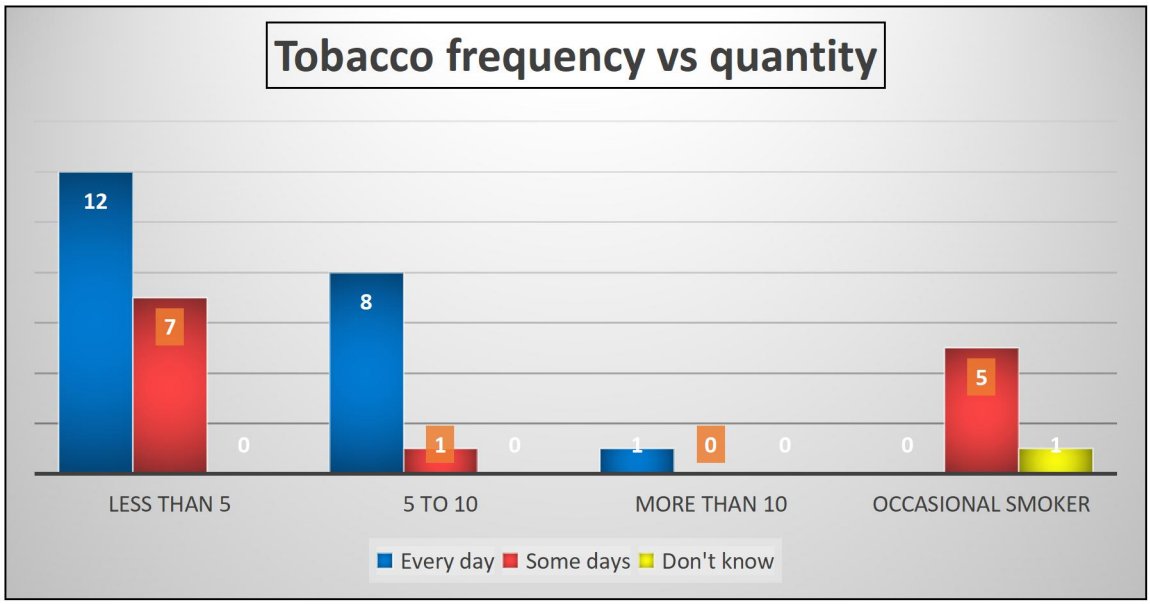


Figure 3.9 Tobacco frequency vs quantity of tobacco

Reasons for Tobacco Use

The survey data revealed several common reasons for tobacco use among the study participants. **Peer pressure** emerged as a significant factor, with **25.71%** of participants reporting it as a motivator for their tobacco use. This finding emphasizes the influence of social dynamics and the need to address peer pressure as a risk factor for tobacco initiation and maintenance.

Stress was identified as another prominent reason, with **22.86%** of participants reporting tobacco use as a means of coping with stress. This highlights the potential role

of tobacco as a maladaptive coping mechanism and suggests the importance of promoting healthier stress management strategies.

The survey also found that **habit** played a significant role, with **31.43%** of participants indicating that their tobacco use was driven by habit. This finding underscores the addictive nature of tobacco and the challenge individuals face in breaking free from long-standing habits.

A smaller proportion of participants (**5.71%**) reported **work-life imbalance** as a reason for tobacco use. This suggests that individuals may turn to tobacco as a means of coping with the demands and pressures of their professional lives.

Personal reasons were cited by **14.29%** of participants as a motivating factor for tobacco use. These reasons may vary widely and encompass personal preferences, enjoyment, or other individual factors that contribute to the decision to use tobacco.

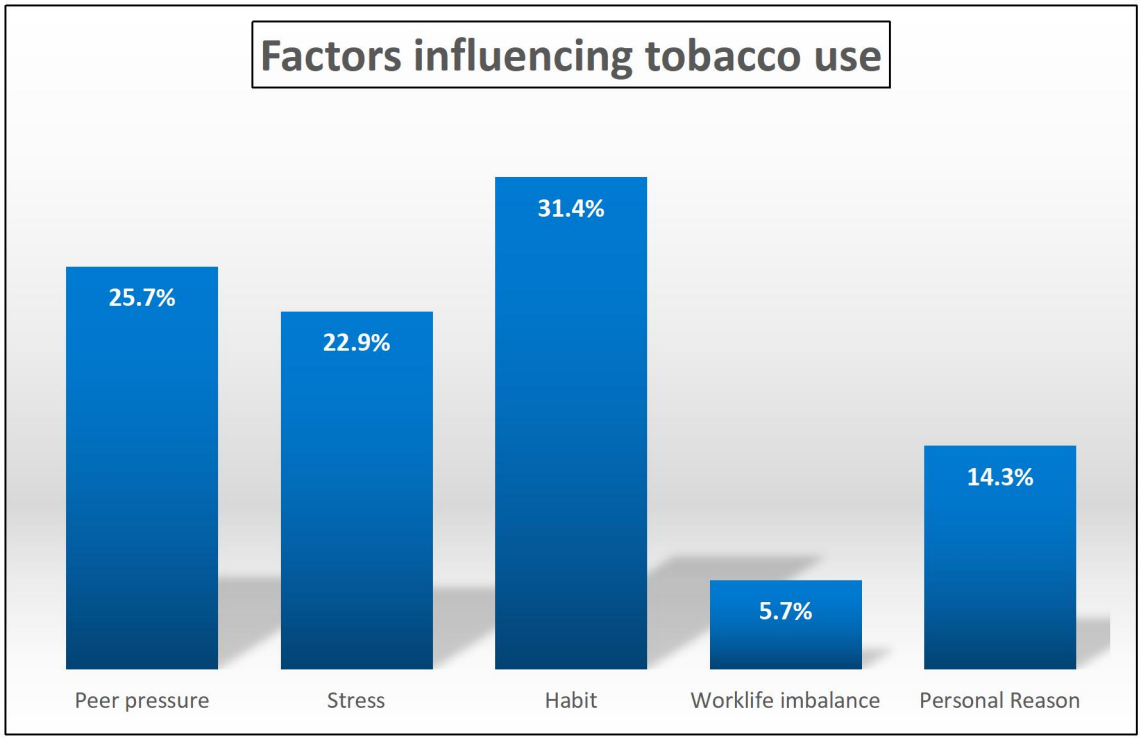


Figure 3.10 Reason for influencing tobacco use

Exercise habits

Regarding exercise habits, the survey data indicated that 64.39% of participants reported engaging in regular exercise or physical activity. This finding is encouraging, as it suggests a considerable portion of the study population is actively involved in maintaining their physical well-being through exercise. However, it is noteworthy that 35.61% of participants reported not participating in any form of exercise or physical activity.

Smoking habits and its relation

Duration of tobacco use- Among the female participant who smoke tobacco found that majority of the participants 48.57% use tobacco from 1 to 5 years, while participants who smoke from less than a year are 37.14% and a minimum users are using tobacco from more than 10 years are 14.29%.

Status of physical activity among tobacco users- Examining physical activity levels among smokers, the data showed that 82.86% of participants engaged in some form of physical activity. This suggests that a significant portion of smokers also recognize the importance of maintaining an active lifestyle. However, 17.14% of smokers reported not participating in any physical activity.

Tobacco user living arrangement- Regarding living arrangements, 21.43% of smokers indicated living alone, while 28.57% lived with friends and 50% lived with family members. These findings highlight the influence of social environments on smoking behaviors, with a substantial number of smokers residing with family or friends.

From how long using tobacco	n	%
Less than a year	13	37.14%
1 to 5 years	17	48.57%
More than 10 years	5	14.29%
Physical Activity for all smoking	**n**	**%**
Yes	29	82.86%
No	6	17.14%
Who do you live with?	**n**	**%**
Alone	7	20.00%
Friends	10	28.57%
With family	18	51.43%

Table 3.12 Physical activity and living arrangement of tobacco users

Association of Private job with different factors

Among individuals working in private jobs, the survey identified various reasons for their career choice. Habit emerged as a prominent factor, with 29.17% of participants indicating it as a motivator. Peer pressure and personal reasons were cited by 25% of participants each, emphasizing the influence of social dynamics and individual preferences on job selection. Stress and work-life imbalance were mentioned by 20.83% and 4.17% of participants, respectively, as additional factors influencing their decision to pursue private jobs.

Analyzing physical activity levels among individuals in private jobs, the data showed that 87.5% of participants reported engaging in some form of physical activity. This suggests that a significant proportion of private job holders recognized the importance

of maintaining an active lifestyle. However, 12.5% of participants reported not participating in any physical activity.

Among private job holders who engaged in physical activity, the majority (70.83%) exercised every day, while 29.17% exercised 2-3 days per week. In terms of exercise duration, 37.5% dedicated less than 30 minutes per session, 66.67% spent 30-60 minutes, and 16.67% exercised for more than 60 minutes per session. These findings indicate a range of exercise habits among private job holders, with a significant portion dedicating a substantial amount of time to exercise.

Tobacco use among private job		
Factors influencing	**N**	**%**
Habit	7	29.17%
Peer pressure	6	25.00%
Personal reason	5	20.83%
Stress	5	20.83%
Work life imbalance	1	4.17%
Education	**N**	**%**
Higher secondary	2	1.74%
Graduation	10	8.70%
Post -graduation n above	23	20.00%
Physical Activity for private jobs	**N**	**%**
Yes	21	87.50%
No	3	12.50%

Frequency	N	%
Every day	17	70.83%
2-3 days/ week	9	37.50%
Occasionally	3	12.50%
Time dedicate for exercise	**N**	**%**
Less than 30 min	9	37.50%
30-60 min	16	66.67%
>60 min	4	16.67%

Table 3.13 Tobacco use among Private jobs

Smoking among adult female Students

According to the data, it found that 40.00% of female adult students had a higher secondary education while the 60.00% had completed graduation.

Also it signifies that 20.00% of female adult students reported smoking less than 5 cigarettes and 60.00% of adult females smoked between 5 to 10 cigarettes and 20.00% identified as occasional smokers.

Duration of Tobacco Use:

Among the adult female students, the data depicts that 80.00% of female adult students had been using tobacco for less than a year and 20.00% reported using tobacco for 1 to 5 years. Also it seems that maximum of students have started using the tobacco at higher secondary and graduation level by the reason of peer pressure and other personal reasons.

Smoking among adult female Students

Education	n	%
Higher secondary	2	40.00%
Graduation	3	60.00%
Quantity of ciggrattes	**n**	**%**
Less than 5	1	20.00%
5 to 10	3	60.00%
Occasional smoker	1	20.00%
From how long using tobacco	**n**	**%**
Less than a year	4	80.00%
1 to 5 years	1	20.00%

Table 3.14 Students vs tobacco

Potential government interventions for reducing tobacco use among female population.

According to the **Cigarettes and Other Tobacco Products Act (COTPA)**, governments has enforce a comprehensive ban on smoking in public places, including educational institutions, workplaces, public transport, and recreational areas.

According to the latest report of Indian express, it shows that **700 challans** in the area of Connaught place, New Delhi in the last 3 months.

As per the latest act of COTPA, a person found smoking in a public place in Connaught Place can be issued a challan of Rs. 2000 for the offense. Every day, 5-7 persons are being caught and challaned by policemen in area of Connaught Place. Last year, some 2,500 challans were issued for smoking in public place which is done in complete Delhi.

As per the **National Tobacco Control (NTC) Program**, government has implement higher taxes on tobacco products, particularly those targeted at women, such as flavored cigarettes or slim cigarettes. Higher prices make tobacco products less affordable and deter women, especially younger individuals, from starting or continuing smoking.

Discussion

The majority of the women in the study agreed that smoking was bad for women's health, but few could pinpoint the specific effects. Lung issues are the bad consequence that is most frequently mentioned. Lung issues have also been linked to other research. Most often cited negative effects of smoking by women[12]. Approximately 26.79% of women knew that smoking causes coronary heart disease, which is a decrease from the GATS survey results [[13]]. In our study it is found that positive trend in awareness among adult females regarding the harmful effects of smoking on lung and heart health. The high percentage of awareness across all age groups suggests that efforts to educate individuals about the health risks associated with smoking have been effective.

Women who are exposed to passive smoking are more likely to have a variety of negative health effects. The most frequent way that girls are exposed to passive smoking is through family or friend smoking [[14]]. In our study it is found that high levels of awareness observed in the adult female population have a significant proportion of understanding of the risks associated with secondhand smoking and passive smoking. Specifically, 89.36% of respondents in the 18-25 age group, 85.71% in the 26-35 age group, and 83.33% in the 36-50 age group were aware of the potential harm caused by secondhand smoke.

Education was linked to improved understanding of negative impacts. This is in line with past research that found a sizable difference between active and passive smoking knowledge in terms of education [15]. In our study, it is found the majority of participants belonged to the age groups of 18-25 and 26-35, with a smaller percentage in the 36-50 age group. Higher education levels were more prevalent, with post-graduation and above being the highest category. This suggests that targeting educational institutions can be an effective approach to reach a significant number of female smokers.

According to the report of Global Adult Tobacco survey 2011, it reveals that the prevalence of tobacco use in the area of New Delhi among female population is 4.8% [16], and according to the study it is found that the prevalence of tobacco use among the participants was 30.43% in the area of Connaught place, New Delhi. As the geography is small also the number of corporates, restaurants and clubs are maximum in the area which is the main reason for tobacco use among adult female population.

In a prior study, 87% of the individuals reported smoking every day. In the age category of 26 to 35 years, 48 individuals smoked five or fewer cigarettes per day, whereas 52% of the participants smoked five or fewer cigarettes per day [17], 24% smoked five to ten cigarettes per day, 17% smoked more than ten cigarettes per day, and 7% smoked one to two cigarettes per day. The bulk of participants, according to our survey, were between the ages of 26 and 35, followed by those between 18 and 25. 60% of the individuals smoke regularly, often 1 to 5 cigarettes daily. Smoking regularly increases the amount of carcinogens consumed. With 65.71% of smokers reporting using tobacco, smoking cigarettes was the most popular method. Less than 5 cigarettes were consumed daily by the majority of smokers. This shows the necessity for treatments aimed at lowering

cigarette consumption and encouraging female smokers to quit.

Duration of Tobacco Use- People who have had cancer in the past are more prone to cancer recurrence and long-term negative effects. Although smoking causes lasting damage, stopping changes one's health, lowers one's risk of developing cancer, and extends one's life by ten years [17]. In our study, it is found most participants reported using tobacco for less than a year or between 1 to 5 years. This suggests that early intervention programs aimed at preventing tobacco initiation and supporting those in the early stages of tobacco use can be effective in reducing long-term tobacco dependence.

Tobacco products by adult females- The high prevalence of cigarette smoking among the study participants. Cigarettes remain one of the most common and widely used tobacco products in Delhi [18]. In our study, the most common type is cigarettes, with 65.71% of participants indicating cigarette smoking as their preferred method with a normal and flavoured cigarette and the combination of both cigarette and hookah was preferred in the area of Connaught place, New Delhi.

Physical Activity and Smoking- There was a significant negative association between physical exercise and tobacco use. Specifically, a higher level of physical exercise was associated with lower rates of tobacco use. This finding is consistent with previous research highlighting the beneficial effects of physical activity on reducing the risk of tobacco use [19]. In our study, a significant proportion of smokers engaged in physical activity, with 64.35% reporting participation in some form of exercise. This highlights the importance of incorporating tobacco cessation interventions within physical activity programs to leverage the motivation and health-conscious mindset of individuals engaging in exercise.

Living Arrangements and Occupation- According to previous study, it suggests that the presence of a supportive social environment, such as living with family or friends, may play a role in reducing tobacco use. On the other hand, individuals living alone may have more autonomy and less social influence, potentially contributing to a lower prevalence of tobacco use [20]. In our study the majority of participants lived with their families, followed by living with friends and living alone. Private job holders constituted the largest occupational group and maximum user of tobacco due to stress, work load, and habit seems to be the reasons using tobacco. This information can guide the design of targeted interventions, taking into account the social and occupational contexts in which female smokers are situated.

Factor influencing tobacco use- One of the primary reasons individuals smoke tobacco is due to its highly addictive nature of tobacco can make it challenging for individuals to quit smoking even when they are aware of the associated health risks [21]. According to our study, it investigated the factors influencing tobacco use among adult females, specifically focusing on peer pressure, stress, habit, work-life imbalance, and personal reasons. The prevalence rates of these factors were found to be 25.71%, 22.86%, 31.43%, 5.71%, and 14.29%, respectively.

Conclusion

The findings of this study shed light on the prevalence and characteristics of tobacco use among the adult female population. It is evident that there is a need for comprehensive tobacco control interventions targeted specifically towards this group.

The discussion highlights several important factors to consider when developing

interventions, such as age, education, cigarette consumption, duration of tobacco use, physical activity, living arrangements, and occupational factors. By addressing these factors, governments and public health organizations can design tailored interventions that effectively reduce tobacco use among adult females.

Furthermore, the high awareness levels regarding the health risks associated with smoking provide a foundation for implementing targeted education campaigns and promoting behavioral change. By emphasizing the harmful effects of tobacco use and highlighting the benefits of quitting, policymakers can encourage and support female smokers in their journey towards tobacco cessation.

Overall, a multi-faceted approach that integrates education, awareness, cessation support, and environmental changes is crucial in reducing tobacco use among the adult female population. By implementing evidence-based interventions and fostering a supportive environment, we can improve the health and well-being of women and contribute to a tobacco-free society.

Recommendation

According to the result of occupational status of self employed, it represents the entrepreneurial spirit within society, where individuals take the initiative to create their employment opportunities.

The participants awareness suggests that educational efforts and awareness campaigns aimed at disseminating information about the harmful effects of tobacco have been effective.

Awareness and Education Campaigns: The government can launch targeted awareness campaigns to educate women about the health risks associated with tobacco use. These campaigns can focus on highlighting the specific risks that affect women's health, such as increased risk of cancer, reproductive health issues, and adverse effects on maternal and child health.

Enforce Tobacco Control Laws: Governments can strengthen the enforcement of existing tobacco control laws and regulations. This includes implementing measures such as smoke-free policies in public places, restrictions on tobacco advertising and promotion, and mandatory health warning labels on tobacco products. Stricter enforcement can help deter tobacco use and create a supportive environment for quitting.

Smoke-free Initiatives: Launch smoke-free campaigns targeted specifically at women, emphasizing the health risks associated with tobacco use, the benefits of quitting, and the protection of non-smokers from secondhand smoke. These campaigns can be conducted through various channels, including mass media, social media, educational institutions, and healthcare facilities.

Access to Cessation Services: Governments can invest in and promote access to tobacco cessation services specifically tailored to the needs of women. This can include providing counseling services, support groups, and pharmacological treatments to assist women in quitting tobacco use. Ensuring these services are affordable, easily accessible, and culturally sensitive can increase the likelihood of successful quitting.

Gender-Sensitive Approaches: Governments can adopt gender-sensitive approaches in their tobacco control strategies. This involves recognizing and addressing the unique

factors that contribute to tobacco use among women, such as social norms, gender roles, and marketing targeted towards women. Gender-sensitive interventions can help challenge these factors and empower women to make healthier choices.

Integration with Women's Health Programs: Governments can integrate tobacco control efforts with existing women's health programs. This includes incorporating tobacco cessation services into reproductive health programs, antenatal care services, and programs targeting women's empowerment and well-being. Integration can improve access and increase the effectiveness of tobacco control initiatives.

Instrumentation

Questionnaire	
Questions	Options
Q1. Age	18-25
	26-35
	36-50
	Above 50
Q2. Highest level of education	Secondary Education
	Higher Secondary School
	Graduation
	Post -graduation n above
	No formal education
Q3. Occupation	Self owned
	Government Job
	Private Job

	Student
	Housewife
	Unemployed
Q4. Do you know about tobacoo and tobacco products	Yes
	No
Q5. Do you currently use smoke/smokeless tobacco?	Yes
	No
Q6. Which type of tobacco you are consuming	Smoke tobacco
	Smokeless tobacco
Q7. Do you use tobacco products every day, some days, or don't know?	Every day
	Some days
	Don't know
S1. If you smoke tobacco, which type of product?	Cigarette
	Bidi
	Cigar
	Hookah
	Any other (Please Specify)
S2. If you smoke tobacco, How many cigarettes, do you smoke daily?	Less than 5
	5 to 10
	More than 10
	Occasional smoker
S3. If you Smokeless tobacco, which type of product?	Gutkha/Pan Masala With Tobacco
	Khaini

	Pan with Tobacco
	Other Chewing Tobacco
	Snuff
	Any other (Please Specify)
S4. If you use smokeless tobacco, How many packets of tobacco, do you consume daily?	Less than 1 packet
	2 to 5packets
	More than 5 packets
Q8. At what age did you first use smoke/smokeless tobacco?	Less than 10 years
	10 to 18 years
	18 to 30 years
	More than 30 years
Q9. How long have you been using smoke/smokeless tobacco?	Less than 1 year
	1 to 5 years
	6 to 10 years
	10 and above
Q10. During the past 12 months, have you tried to stop smoking/smokeless tobacco?	Yes
	No
Q11. What are the reason for using smoke/ smokeless tobacco in Connaught Place?	Peer pressure
	Stress
	Habit
	Worklife imbalance
	Social Stigma
	Personal Reason
	Any other (Please

	Specify)
Q12. According to you, does quitting smoking reduce chance of cancer?	Yes
	No
Q13. Are you aware that smoking leads to both lung and heart diseases?	Aware
	Not Aware
Q14. Are you aware that smoking affects a nonsmoking person? (passive smoker)	Aware
	Not Aware
Q15. Is smokeless tobacco less harmful and lethal than cigarettes?	Yes
	No
Q16. Who do you live with?	With family
	Friends
	Alone
Q17. Do you work out/ any kind of excercises	Yes
	No
S5. If Yes, Type of physical activity	Yoga
	Gym
	Walking
	Running
	Dancing
	Others
S6. How much time do you dedicate for excercise?	Less than 30 min
	30-60 min
	>60 min
S7. How often do you go for the excercise?	Every day
	2-3 days/ week

	occationally

References

[1] Sharma R, Garg S, Gupta VK, Singh MM. Prevalence and determinants of hookah use among college-going women of Delhi. Natl Med J India. 2016 Nov-Dec;29(6):312-315. PMID: 28433940.

[2] Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. PLoS medicine. 2006 Nov 28;3(11):e442.

[3] Mishra G, Pimple S, Shastri S. An overview of the tobacco problem in India. Indian Journal of Medical and Paediatric Oncology [Internet]. 2012;33(3):139. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3523470/

[4] DUHS Library. (n.d.). Quadrant I: Research methodology and biostatistics. Retrieved from https://duhslibrary.ac.in/Content/716_27_1493722858QuadrantI.pdf

[5] World Health Organization. WHO global report on trends in prevalence of tobacco use 2000-2025: Third edition. Geneva, Switzerland: World Health Organization; 2021.

[6] Umar A, Ibrahim A, Idris H, Ismail S. Quality of life and associated factors among breast cancer survivors attending a tertiary hospital in Nigeria. BMC Womens Health. 2022 Jan;22(1):30. doi: 10.1186/s12905-022-02014-3. PMID: 34958749; PMCID: PMC8803711.

[7] The Tobacco Atlas [Internet]. 2022 [cited 2023 Mar 17]. Available from: https://tobaccoatlas.org/.

[8] Pandey D, Goel S, Kondal D. Predictors of maternal anemia in a rural area of Haryana, India: A secondary data analysis. J Family Med Prim Care. 2017 Oct-Dec;6(4):711-716. doi: 10.4103/jfmpc.jfmpc_172_16. PMID: 29417048; PMCID: PMC5792555.

[9] Kruk ME, Gage AD, Arsenault C, Jordan K, Leslie HH, Roder-DeWan S, Adeyi O, Barker P, Daelmans B, Doubova SV, English M, Elorrio EG, Guanais F, Gureje O, Hirschhorn LR, Jiang L, Kelley E, Lemango ET, Liljestrand J, Malata A, Marchant T, Matsoso MP, Meara JG, Mohanan M, Ndiaye Y, Norheim OF, Reddy KS, Rowe AK, Salomon JA, Thapa G, Twum-Danso NA, Pate M, Freedman LP. High-quality health systems in the Sustainable Development Goals era: time for a revolution. Lancet Glob Health. 2018 Nov;6(11):e1196-e1252. doi: 10.1016/S2214-109X(18)30223-7. PMID: 30322627.

[10] Stead LF, Perera R, Lancaster T, Griffin A. Telephone counselling for smoking cessation. Nicotine Tob Res. 2004 Nov;6 Suppl 2:S125-S130. doi: 10.1080/14622200412331320759. PMID: 15799598.

[11] Giri V, Karthikayan R, Krishna M, Ramesh T, Reddy SV. Knowledge and perception about health risks associated with tobacco habit - A survey. ResearchGate. 2020 [cited 2023 Apr 2]. Available from:

https://www.researchgate.net/publication/344975036_Knowledge_and_Perception_about_Health_Risks_Associated_with_Tobacco_Habit_-_A_Survey.

[12] Roth LK, Taylor HS. Risks of smoking to reproductive health: assessment of women's knowledge. American journal of obstetrics and gynecology. 2001 Apr 1;184(5):934-9.

[13] Annadani RR, Bhat SK, Undi M. A study to assess the magnitude of exposure to secondhand smoke among antenatal mothers in an urban slum of central Karnataka. Indian Journal of Community and Family Medicine. 2020 Jan 1;6(1):41.

[14] Hemalatha K, Varunkumar R, Vandana SJ. Magnitude of exposure and perception of second hand smoking among rural population in Trichy, Tamil Nadu. International Journal of Community Medicine and Public Health. 2017 Aug;4(8):2946.

[15] Bhanji S, Andrades M, Taj F, Khuwaja AK. Factors related to knowledge and perception of women about smoking: a cross sectional study from a developing country. BMC women's health. 2011 Dec;11(1):1-8.

[16] Arora M, Reddy KS. Global youth tobacco survey (GYTS)-Delhi. Indian pediatrics. 2005 Aug 1;42(8):850.

[17] Santhanam A, Sherlin HJ, Jayaraj G, Don KR. Knowledge and Perception about Health Risks Associated with Tobacco Habit—A Survey. European Journal of General Dentistry. 2020 Sep;9(03):163-9.

[18] Campbell BK, Le T, Gubner NR, Guydish J. Health risk perceptions and reasons for use of tobacco products among clients in addictions treatment. Addictive behaviors. 2019 Apr 1;91:149-55.

[19] Pokhrel P, Schmid S, Pagano I. Physical activity and use of cigarettes and e-cigarettes among young adults. American journal of preventive medicine. 2020 Apr 1;58(4):580-3.

[20] Dobson R, Demou E, Semple S. Occupational exposure to second-hand tobacco smoke: development of a job exposure matrix. Annals of Work Exposures and Health. 2021 Nov;65(9):1133-8.

[21] Bhojani UM, Chander SJ, Devadasan N. Tobacco use and related factors among pre-university students in a college in Bangalore, India. National Medical Journal of India. 2009 Jul;22(6):294.

IIHMR DELHI
INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH (IIHMR)
Plot No. 3, Sector 18A, Phase- II, Dwarka, New Delhi- 110075
Ph. +91-11-30418900, www.iihmrdelhi.edu.in

CERTIFICATE ON PLAGIARISM CHECK

Name of Student (in block letter)	**Dr/Mr./Ms.: MANISH BAJAJ**		
Enrolment/Roll No.	PG/21/145	**Batch Year**	2021-2023
Course Specialization (Choose one)	Hospital Management	Health Management	Healthcare IT
Name of Guide/Supervisor	Dr/ Prof.: Rohini Ruhil		
Title of the Dissertation/Summer Assignment	Risk Perception study of Tobacco Use among Adult Female Population in Connaught Place, New Delhi- A Cross-Sectional Study		
Plagiarism detects software used	"TURNITIN"		
Similar contents acceptable (%)	Up to 15 Percent as per policy		
Total words and % of similar contents Identified	**15%**		
Date of validation (DD/MM/YYYY)	26/06/2023		

Guide/Supervisor
Name: Dr. Rohini Ruhil
Signature: Rohini
Report checked by 27/06/25

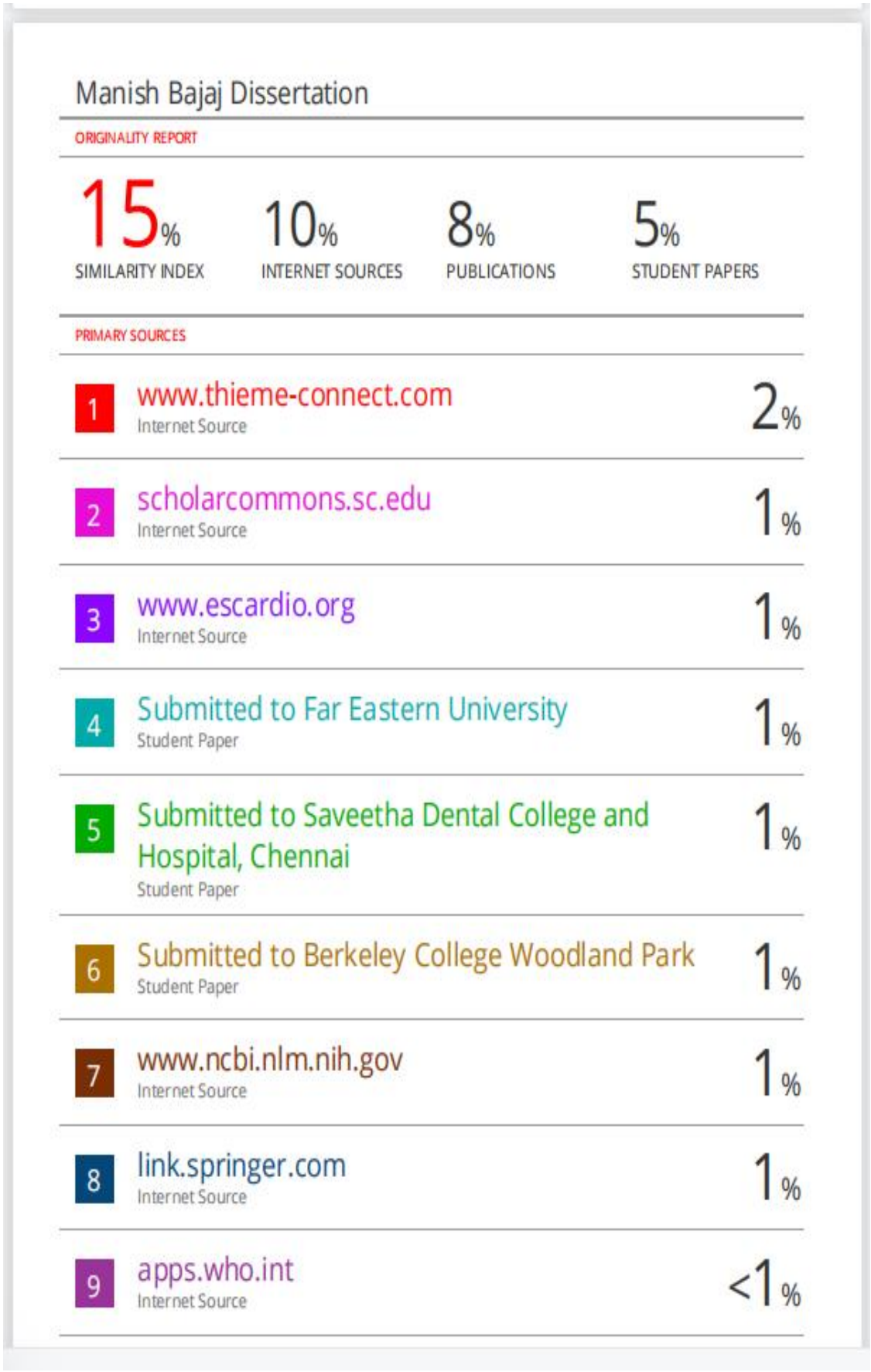
Student
Name: MANISH BAJAJ
Signature:

Institute Librarian
Ashok Kumar
Signature:
Date:
Library Seal

Dean (Academics and Student Affairs)

Signature:
Date:
(Seal)

67



Manish Bajaj Dissertation

ORIGINALITY REPORT

15%	10%	8%	5%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	www.thieme-connect.com Internet Source	2%
2	scholarcommons.sc.edu Internet Source	1%
3	www.escardio.org Internet Source	1%
4	Submitted to Far Eastern University Student Paper	1%
5	Submitted to Saveetha Dental College and Hospital, Chennai Student Paper	1%
6	Submitted to Berkeley College Woodland Park Student Paper	1%
7	www.ncbi.nlm.nih.gov Internet Source	1%
8	link.springer.com Internet Source	1%
9	apps.who.int Internet Source	<1%

10	stacks.cdc.gov Internet Source	<1%
11	Submitted to IDEA Leadership & Management Institute Student Paper	<1%
12	"Tobacco Control in China", Springer Science and Business Media LLC, 2018 Publication	<1%
13	Submitted to Middle East Technical University Student Paper	<1%
14	hdl.handle.net Internet Source	<1%
15	ijcfm.org Internet Source	<1%
16	Submitted to University of Sydney Student Paper	<1%
17	McDaid, David, Sassi, Franco, Merkur, Sherry. "EBOOK: Promoting Health, Preventing Disease: The Economic Case", EBOOK: Promoting Health, Preventing Disease: The Economic Case, 2015 Publication	<1%
18	adam.curry.com Internet Source	<1%
19	codeblue.galencentre.org Internet Source	<1%

20	"63rd Annual Conference of the Indian Society of Gastroenterology, ISGCON 2022—January 5th – 8th, 2023 in Jaipur", Indian Journal of Gastroenterology, 2022 Publication	<1 %
21	Submitted to Morgan State University Student Paper	<1 %
22	Judith S. Brook, Martin Whiteman, Ann Scovell Gordon, David W. Brook. "Fathers and Sons: Their Relationship and Personality Characteristics Associated with the Son's Smoking Behavior", The Journal of Genetic Psychology, 1983 Publication	<1 %
23	Submitted to Ngee Ann Polytechnic Student Paper	<1 %
24	journalofethnicfoods.biomedcentral.com Internet Source	<1 %
25	theses-test.ncl.ac.uk Internet Source	<1 %
26	Submitted to Higher Education Commission Pakistan Student Paper	<1 %
27	Rajeev Kumar. "chapter 73 Organizational Performance through Dairy Supply Chain Management Practices", IGI Global, 2020 Publication	<1 %