

FOUNDATION FOR A **SMOKE-FREE WORLD**

A comprehensive study
on the behavioural dynamics
of tobacco smokers in India,
Bangladesh & Nepal



An ISO 14001:2015 certified organization

Executive Summary

The project “A comprehensive study on the behavioural dynamics of tobacco smokers in India, Bangladesh & Nepal” was launched successfully in mid-October 2022. In the first quarter of the project, extensive background research has been conducted through exhaustive literature review encompassing smoking habit cessation activities and programs, scientific studies at science-society interface and as well several methodological reviews for data interpretation and interpolating the gaps in knowledge using digital and archived secondary sources. The literature review was analyzed to develop the research design and guiding the assessment and survey tools. While the sociometric survey for identifying the beneficiaries and the targets cohorts have been initiated following standard procedural methods and protocols like Pre-informed Free Consent (PIFC) of the subjects and communities, the structured questionnaire for socio-psychometric analysis has been drafted following WHO guidelines and literature reviews. Experienced medical practitioners, social psychiatrists and action-researchers have reviewed the questionnaire followed by field validation of data with a 10% sample size (100-120 samples) in India and Bangladesh. Following this, formal training, and development of 20 surveyors each in India, Bangladesh and Nepal for efficiently undertaking the socio scientific surveys and data collection in digital platform was completed and digital data accrual and archival facilities have been created through free access cloud-services in Google online form and Kobo Toolbox (www.kobotoolbox.com). In a parallel effort collaborations and partnership development initiatives have also been initiated with positive institutional linkages and agreements with several target organizations. The detailed outcome and analysis of the study are presented below.



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Part I

1. Introduction

The most significant avoidable cause of morbidity and mortality in the world is tobacco usage. In 2010, the WHO projected that tobacco use, primarily in the form of smoking, causes 4.9 million premature deaths annually. If the present rate of tobacco usage remains steady, this figure will increase to eight million by 2030, from 7.1 million in 2016. In underdeveloped nations, tobacco use has a substantially significant negative impact on health. Between 2005 and 2030, smoking-related deaths in these nations are predicted to reach approximately forty million. India, Bangladesh and Nepal were the three countries that were studied as a part of the project titled “A comprehensive study on the behavioural dynamics of similar underserved cohorts of tobacco smokers in India, Bangladesh & Nepal to recommend a community-based sustainable tobacco cessation program”. The objective of the study was to develop a comprehensive literature review and needs assessment survey to identify the psycho-biological and societal drivers of smoking so that a cohort-level sustainable tobacco cessation program can be recommended. The recommendation will be based on the immediate need of the beneficiaries to understand the importance and impediments to the adoption of tobacco harm-reduction (THR) products in developing an alternative cessation strategy¹.

This project recommends an immediate adaptive paradigm reinforced with evidence-based contemporary research approaches like multicriteria decision analysis and scenario planning designs for a transparent, participatory and reciprocal program at the societal interface for tobacco harm-reduction and cessation of smoking habits across varied cohorts of underserved marginal communities. Further, it advances with strategic partnership building among direct stakeholders to integrate research with appropriate action that can sustain the efforts as a systemic solution for society. There have been efforts to eradicate the habit of tobacco but in the developing south, especially in countries like India, Bangladesh Nepal, the same has either been delimited by passive statutory warning or restricted to urbanite rehabilitation therapy, inaccessible for the marginal commons, wherein every fourth person is a smoker. It is thus important to design interventions that aspire to eradicate this inequity in accessibility and the smoking habit with an adaptive and inclusive approach. Its axiom that habit of tobacco smoking is a common addiction that has its roots in several psychobiological and socioeconomic factors, acting as drivers across communities, ages, gender and even livelihoods. Though the habit is determined by different drivers in different cohorts, varying between age, gender, trade and circumstances, the cessation therapy and remedial alternatives have been cliché with a mitigation approach and the remedial therapy became a white elephant that should have been an adaptive strategy planning. This research provides multi-criteria decision support mechanisms with empirical evidence, substantial scenario planning, and a contemporary design approach to resolving the epitome of the challenge. The study objectives, therefore, aspire to decipher complementarity in solution sets, reciprocity in design-approach and multipronged investigations of the problem. It recommends cohort-specific scenario planning, community-based sustainability in remedial programs and as well evidenced-based adaptive learning to dig-dip. It would enrich the research resource potentials in this domain and augment its compatibility and compliances at the science-society interface.

Table 1: Details of beneficiaries approached and interviewed in India, Bangladesh and Nepal

| Country | Particulars | Person Approached | | Person Interviewed | |
|-------------------|----------------|-------------------|--------|--------------------|--------|
| | | Male | Female | Male | Female |
| India | Sample size | 2039 | 523 | 1179 | 43 |
| | Percentage (%) | 79.59 | 20.41 | 96.48 | 3.52 |
| Bangladesh | Sample size | 1850 | 225 | 1236 | 1 |
| | Percentage (%) | 92.04 | 11.19 | 99.92 | 0.08 |
| Nepal | Sample size | 1962 | 358 | 1039 | 118 |
| | Percentage (%) | 84.57 | 15.43 | 85.80 | 9.74 |

1.a. Deliverables

- i. A comprehensive research report with the findings of the study
- ii. Stratified data (age, gender, socio-economic, occupation) on vulnerability, susceptibility and resilience to tobacco smoking habit, based on primary sociometric analysis.
- iii. Comprehensive research methodology for assessing the unique needs of cohorts described above with designed study tool for the method, tested and validated in each target community.
- iv. A community-based tobacco cessation program planned on scenario planning and multicriteria decision analysis system for the studied cohort of underserved populace, as a recommendation for the way forward.
- v. A recommended policy framework and operational guideline for implementation and policy insinuation towards smoking habit cessation and THR.
- vi. For partnership with the relevant partners from concerned authorities in all participating countries MoUs (Memorandum of understanding) will be done.
- vii. A 3-minute video documentation based on the smokers' survey in 3 countries and responses of the important stakeholders in each country.

2. Tobacco addiction and smoking scenario

2.a. India

India confronts a significant health concern since it has the second-highest rate of tobacco use in the world. In 2017, approximately 266.8 million adults in India used tobacco in one form or another, which is more than twice as high as in the European Union. India faces a dual burden of tobacco use in the form of smoking and smokeless tobacco. In accordance with the Global Adult Tobacco Survey (GATS) carried out in 2016–17, India has a prevalence of tobacco usage of 10.38% for smoking and 21.38% for smokeless tobacco. 28.6% of the surveyed adult individuals smoke or use smokeless tobacco products, comprising 42.4% of males and 14.2% of women. The National Family Health Survey (NFHS), is one of the largest demographic health surveys conducted in India providing disaggregated estimates of several health and demographic indicators. The government of India recently released the key findings from Phase 1 of the survey conducted in 2019–20, which also included information regarding current tobacco use among Indian adults in 22 states and union territories. The overall incidence of

tobacco usage among men and women under the age of 15 years showed that there is still a problem regarding tobacco consumption in the northeastern states.

Table 2: The percentage of tobacco usage among men and women under 15 years old in states of India (NFHS-5, 2019-20)²

| State | Male (%) | Female (%) |
|-----------------------------|----------|------------|
| Mizoram | 72.9 | 61.6 |
| Andaman and Nicobar Islands | 58.7 | 31.3 |
| Manipur | 58.1 | 43.1 |
| Tripura | 56.9 | 50.4 |
| Assam | 51.8 | 22.1 |
| West Bengal | 48.1 | 10.8 |

The absolute number of tobacco users in India is still very high due to its huge population, which has a high risk of developing various chronic diseases. The National Health Policy 2017 of the Government of India has set the target of ‘relative reduction in the prevalence of current tobacco use by 15% by 2020 and 30% by 2025’. GATS-2 shows a relative reduction of 17% in prevalence of current tobacco use since GATS-1².

2.a.1 Health consequences and economic burden

Smoking and exposure to second-hand smoke kill more than 1 million adults each year in India

Case Study I

I am Pursattam Maity, 27 years old residing in the Ghuni slum since birth. I am a helper in masonry work, a daily wage earner. It is a very strenuous job. At the end of the day, I used to sit with my fellow workers, in a nearby tea shop and play cards. Some of them used to smoke bidi. In the beginning, my smokers’ friends compel me to smoke bidi for a while, they told me it would refresh my mental and physical exhaustion. I started smoking bidi as a trial to assess whether it gives me any good feelings or not. Presently, I am a chain smoker for 15 years and do not care whether smoking gives me any sort of relaxation or not. It is a part of my daily life, deeply embedded in my system. I do not want to quit smoking and consider any alternatives.

accounting for 9.5% of overall deaths. Tobacco exacts a high cost on society. The financial burden of morbidity and mortality in India caused by tobacco use from 2017 to 2018 was INR 1773.4 billion (USD 27.5 billion). Indirect expenditures (from lost productivity due to illness and death) accounted for 78% of the overall cost (INR 1386.3 billion or US\$21.5 billion), while direct healthcare costs made up 22% of the total (INR 387.1 billion or US\$6 billion). INR 132.4 billion, or \$20.5 billion, or 75% of the entire economic expenditures were incurred due to early mortality. Direct medical expenditures account for 5.3% of

all health spending, whereas the entire costs of tobacco amount to 1.04% of India's GDP³.

2.a.2 Tobacco industry

Smokers in India primarily smoke Bidi’s and Cigarettes. Bidis are traditional hand-rolled tobacco in tendu leaves. Bidi rolling is a cottage-based enterprise in India that mostly employs women and children. In India, bidis outsell cigarettes eight to one (8:1). With 79% of the market's total volume sales, ITC Ltd, a subsidiary of British American Tobacco, leads the cigarette industry in India. With 11% of the market, Godfrey Phillips India comes in second,

followed by VST Industries with 7.7%. 2% and 3.5%, respectively, are held by Japan Tobacco and Philip Morris International. In India, cigarettes were sold for close to 81.3 billion in 2017.

2.a.3 Legislation for Tobacco Control

The Cigarettes (Regulation of Production, Supply and Distribution) Act, 1975, which necessitated explicit statutory health warnings on cigarette packs in 1975, was India's first piece of tobacco-related legislation. The main comprehensive law controlling tobacco control in India is the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA). The Act was passed before India became a Party to the WHO, however, the trails of regulations on tobacco control in India have taken a much winding track since its inception.

2.a.4 Regulations for Smoke-free areas

All public spaces, including job, healthcare, educational, and governmental establishments, as



Figure 2(1): Smoker's survey with community of India, Bangladesh and Nepal

well as on public transportation, are smoke-free zones. However, the law allows for the establishment of smoking areas or spaces in airports, hotels with 30 or more rooms, and restaurants with 30 or more seats. Open auditoriums, stadiums, train stations and bus stops/stands are non-smoking areas in outdoor settings. State governments have the authority to adopt smoke-free regulations that are stricter than federal law.

2.a.5 Tobacco advertising, promotion and sponsorship

G.S.R. 345(E) modifies the 2004 Rules with additional rules on point-of-sale advertising and adds a definition of indirect advertising with regard to tobacco advertising, promotion, and

Case Study II

I am Rupesh Yadav, 30 years old residing in Kalikapur slum past 19 years. I am a truck driver. I started smoking at an incredibly young age may be at 6 or 7. When I was young, my father used to smoke bidi, and cigarettes and throw the butts here and there. At that age, with lots of curiosity about the fiery stick, I usually gathered the butts and chewed them to know the taste. Later, I tried to light the bidi and emit smoke like, my father. This act gave me immense pleasure that I was able to adopt my father's style. Now, I have to drive for long hours without smoking it is hard to retain my concentration. Sometimes unknowingly when my bidi/cigarette stock gets exhausted with no nearby shop to buy bidi I feel very disturbed. Smoking relaxes my mind and helps me to be focused during driving, it has become a part of my livelihood. I never thought of quitting smoking, not even in my worst nightmare.

sponsorship. Additional point-of-sale regulations are provided by G.S.R. 619(E), and rules for television, film, print, and outdoor media are established by G.S.R. 786(E). The rules for television and movies have been updated by G.S.R. 708(E). Furthermore, the Cable Television Networks (Regulation) Act, 1995 (CTNA) and its 2009 implementing rules forbid the direct advertisement of tobacco products on Indian cable networks but permit the indirect advertisement of such products in certain situations. However, it seems

that until the guidelines required by the CTNA Rules are issued, indirect tobacco product advertising is prohibited according to a subsequent Ministry of Information and Broadcasting Directive. Finally, the Central Board of Film Certification is required by the Guidelines promulgated in accordance with Section 5B (2) of the Cinematograph Act of 1952 to ensure that specific smoking scenes do not appear in motion pictures. Advertising is not permitted in the majority of the media. Both tobacco sponsorship and the publicity around it are subject to limitations.

2.a.6 Tobacco Packaging and Labelling

The size of the warning was increased from 40% of one side of the packaging for tobacco products to 85% of both sides on October 15, 2014, by the government through G.S.R. 727(E), which also changed the rotation schedule outlined in G.S.R. 985(E). The rules stated by G.S.R. 727(E) were supposed to take effect on April 1, 2015, however G.S.R. 739(E) sets the 85 percent health warnings' implementation date as April 1, 2016. New warnings were issued by the government on September 1, 2018, December 1, 2020, and December 1, 2022 (G.S.R. 331(E), G.S.R. 458(E), and G.S.R. 592(E), respectively). G.S.R.

Case Study III

I am Sujoy Mandal, 42 years old, living in Beck Bagan, Kolkata since I came here in search of work from Ranaghat, Nadia approximately 27 years ago. I am currently working in the unorganized private sector. I buy the old newspaper, used plastics, and garbage from door to door, at the end of the day I sell these to the local vendor and take my daily earning. The whole day I have to pull my van under the scorching sun, in torrential rain or trembling winter. If I get 6 to 8 sellers a day, it suffices my subsistence but very frequently I got only 2-3 sellers. This meagre condition and the hardness of my job compelled me to start smoking. I started at the age of 15 years and smoke about 30-35 bidis a day. Usually after returning home when I confront the pale face of my wife, and 2 daughters my sense of incompetence gets triggered. I take a bunch of bidis, sit under a banyan tree and smoke continuously. I feel relaxed, and after 2/3 hours my negative thoughts get settled. Smoking helps me to fight the hurdles of my life. I cannot think of surviving without smoking.

182(E)'s clauses forbidding false advertising and hiding health warnings on packages remain in place. Health advisory Labels on tobacco product packaging are visual and textual, covering 85% of the front and rear panels parallel to the top edge, and are changed every 12 months. It is against the law to use deceptive phrases on packaging and labelling, including "light," "low tar," and other indicators.

2.a.7 Tobacco taxation and prices

The World Health Organisation advises increasing tobacco excise taxes to the point where they make up at least 70% of retail costs. The tax system in India was complicated with various tax rates and distinct taxes applied to smoking and smokeless tobacco. This peculiarity is compounded by the fact that while most smokeless items were subject to ad valorem tax, cigarettes were subject to a particular excise charge based on the weight of the tobacco, length of the stick, and filter or non-filter status. By raising the National Calamity Contingent charge (NCCD) on cigarettes, the excise charge on tobacco was raised in the Union Budget 2023–24. Simply put, NCCD is a sin tax applied to goods and services that can be detrimental to the general population.

2.a.8 Cigarette contents and disclosures

The ability to control the ingredients in cigarettes is not granted by law. Manufacturers and importers are not compelled by law to provide government agencies with information on the components and emissions of their goods.

2.a.9 Sales restrictions

The selling of tobacco products in vending machines and within 100 yards of school facilities is against the law. Additionally, the sale of single cigarettes, gutka, and other types of smokeless tobacco is prohibited in a number of states. The sale of tiny packs of cigarettes or other tobacco products, as well as sales via the internet, are unrestricted. Tobacco products cannot be sold to anybody under the age of 18.

2.a.10 E-cigarettes and heated tobacco products

The 2019 E-Cigarette Ordinance is replaced by the Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) Act, 2019 (No. 42 of 2019), which forbids the sale of e-cigarettes, e-cigarette components, and HTPs as well as their advertisement. The manufacturing, manufacture, import, export, transportation, sale, distribution, and advertising of e-cigarettes are all prohibited by law. The use of e-cigarettes is not constrained in any way. Heated tobacco products (HTPs) may not be sold. The current anti-smoking laws apply to HTPs. The legislation forbids the marketing and advertising of tobacco devices and inserts, both directly and indirectly.

2.b. Bangladesh: Bangladeshi culture is deeply rooted in tobacco usage. There is a long history of tobacco usage in Bangladesh, and both smoked and smokeless tobacco are used in various ways. Bangladesh is another nation that makes tobacco. Tobacco is grown on around 46,472 acres of land, and 87,628 tonnes of tobacco leaf are produced annually. Bangladesh produces

1.3% of the world's tobacco, ranking 14th in terms of amount produced and 12th in terms of quality. Death and sickness from tobacco use impede a nation's social and economic development. Early mortality or incapacity due to tobacco smoking lowers living standards and



hinders the family's financial situation. Additionally, it is estimated that 1.2 million people developed illnesses as a result of smoking. The Government of Bangladesh has taken action to reduce tobacco usage, similar to many other nations. The National Strategic Plan of Action for Tobacco Control (2007-2010) has just recently been put into practice across the nation.

2.b.1 Tobacco consumption

46.0% of the men, and 25.2% of the women, among all (35.3%) adults (age 15 and above) use tobacco products. 20.6% of people use smokeless tobacco (men 16.2%; women 24.8%),

Case Study IV

My name is Shimul Ray. 35-year-old, residing in Gazipur, Bangladesh. Working in a roadside food stall for 20 years at the same place. I smoke three packets of bidi and 1 packet of cigarettes every day. I used to cook for 12 hours a day. The pungent smell, smoke and heat beside the cooking oven blunted my normal senses. I experienced headaches and shoulder aches very often in the early stage. I felt like carrying a heavy weight on my shoulder. Then I started smoking around 15 years back. In the beginning, I felt that smoking helped me to solve my irritation to some extent. But presently smoking is a mere habit of mine, I just light up a bidi or cigarette as I wish. Smoking provides some fresh air in my monotonous life. At night I plan lots of things regarding my business with a cigarette. I will not quit smoking and my financial condition will not allow me to think of any alternatives.

whereas 18.0% of adults smoke tobacco (men 36.2%; women 0.8%). Cheaper, homemade cigarettes known as bidis are popular among Bangladesh's marginal class. Bidis are used by more than a quarter of adult smokers in Bangladesh (5.0% of all people). Youth (aged 13 to 15) consume tobacco in any form in 6.9% of cases (9.2% of boys and 2.8% of girls). 2.9% of people presently smoke (boys 4.0%, girls 1.1%). Smokeless tobacco consumption is 4.5% (boys 5.9%; females 2.0%).

2.b.2 Health consequences and economic burden

46.0% of the men, and 25.2% of the women, among all (35.3%) adults (age 15 and above) use tobacco products. In Bangladesh, tobacco use caused almost 126,000 deaths in 2018, or 13.5% of all fatalities there. In Bangladesh, there are now 1.5 million individuals with ailments related to tobacco use. More than 61,000 youngsters (under the age of 15) are afflicted by illnesses brought on by exposure to second-hand smoke⁴.

The overall monetary loss caused by tobacco-related illness and mortality in Bangladesh in 2018 was BDT 305.6 billion (USD 3.6 billion), or 1.4% of the country's GDP. A total of BDT 84 billion was spent on treating tobacco-related disorders directly, and the remaining BDT 221.7 billion was lost productivity as a result of premature mortality and disability brought on by cigarette use. 13.5% of the overall expenditures associated with tobacco usage were brought on by second-hand smoke exposure.

2.b.3 Tobacco industry

British American Tobacco, which controls 66.6% of the volume of the cigarette market in Bangladesh, and Dhaka Tobacco Industries (under the Akij Group), which has 20.5% of the

Case Study V

My name is Shrikant Pal, 22 years old, residing in Dhaka, a student of engineering. When I join the college saw nearly everyone smokes. Smoking creates a cool image. Though I avoided it at first, friends laughed at me several times for not smoking. Then I started smoking to make my masculine image. Now smoking is a daily routine for me, if I do not smoke a cigarette after dinner at night, it seems that the food will remain undigested.

market, are the two main tobacco producers there. Through Dhaka Tobacco Industries, Philip Morris International distributes its goods in Bangladesh, and Japan Tobacco Inc. increased its market share by acquiring Akij Group in 2018. Abul Khair Leaf Tobacco, Alpha Tobacco Company, Nasir Gold Tobacco Company, and Sonali Tobacco are a few of the smaller domestic businesses. In Bangladesh, 91.6 billion cigarettes were sold in 2018.

2.b.4 Legislation for Tobacco Control

Since Bangladesh ratified the WHO Framework Convention on Tobacco Control (FCTC) in 2003, anti-tobacco legislation and regulations in Bangladesh, including taxes, have been progressively more stringent. The Smoking and Tobacco Products Usage (Control) Act of 2005, as revised by the Smoking and Tobacco Products Usage (Control) (Amendment) Act of 2013, is the main national law governing tobacco use. The Act forbids smoking in many public locations and places of employment, although it permits smoking zones in select places, including hotels and restaurants. In addition to being smoke-free, many outdoor spaces (such as children's playgrounds, festivals, and bus stops) also allow smoking in designated areas. It forbids all tobacco advertising, sponsorship, and promotion, including at the point of sale, and

mandates graphic health warnings on the front and rear of packaging for both smoking and smokeless tobacco that must cover at least 50% of the package on each side. Smokeless tobacco (SLT) usage among adults in Bangladesh is quite prevalent, yet the Tobacco Control Law did not cover SLT until 2013. 2.9 Legislative road map for tobacco control. The Act's implementing regulations, known as the Smoking and Tobacco Products Usage (Control) Regulations, 2015, contain more information about several of the law's provisions. The WHO Framework Convention on Tobacco Control was ratified by Bangladesh after the 2005 Act was approved, and as long as there were no sections that were in conflict, it was added to existing laws rather than being a departure from them. The Railways Act of 1890, which prohibits smoking in railway cars, is included in the non-exhaustive list of current laws. To ensure that local governments properly execute the Tobacco Control Act, the Ministry of Local Government, Rural Development, and Cooperatives released implementation guidelines in March 2021. Among other measures, these regulations cover things like location-based sales limitations and criteria for retail licenses.

Case Study VI

I am Atik Hossain, 52 years old, living beside Mongla Port, Bangladesh. I carry goods from the port area to the respective vendor. I am a daily wage earner. It's laborious work. I started smoking to get rid of muscle fatigue and body pain. When I smoke it seems that the intensity of the pain is a bit lower but now it makes no difference, I smoke as an inherent habit. The upper hierarchy people of my profession often offer me a packet of bidi as a token of my good performance. I enjoy smoking and never thought of quitting. I am a non-educated person, for me smoking alternatives, capacity building, and counselling at this age are impractical.

2.b.5 Smoke-free areas

Most indoor public spaces and workplaces have restrictions on or outright bans on smoking. Public spaces may have designated smoking areas, however, the legislation specifies the number of locations, including healthcare and educational establishments, where such areas are not authorized. Public transport with one room is not allowed to smoke in, however, vehicles with two or more rooms may have dedicated smoking areas. Children's playgrounds, festivals, and lines of people waiting to board public transportation are examples of outdoor locations where smoking is prohibited. Smoke-free regulations may be passed by subnational jurisdictions that are stricter than national law.

2.b.6 Tobacco advertising, promotion and sponsorship

Advertising for tobacco products is not allowed in any print or electronic media, even at points of sale. However, tobacco goods with non-tobacco brand names are acceptable. Free and discounted tobacco products are also forbidden. Although tobacco industry sponsorship is not entirely forbidden, it is forbidden to publicize the sponsorship.

2.b.7 Tobacco packaging and labelling

The rule mandates that all tobacco products must have dynamic visual health warnings covering at least 50% of their primary display areas. On cigarette packaging, deceptive phrases

like "light" and "low tar" are forbidden, but deceptive packaging (such colours, figures, and symbols) is not.

2.b.8 Tobacco taxation and prices

The World Health Organisation advises increasing tobacco excise taxes to the point where they make up at least 70% of retail costs. Bangladesh's tobacco excise taxes fall short of these guidelines.

2.b.9 Cigarette contents and disclosures

The ability to control the ingredients in cigarettes is not granted by law. Manufacturers and importers are not compelled by law to provide information about their goods' emissions to government agencies, and it is unclear if they are also required to provide information on the items' contents.

2.b.10 Sales restrictions

The selling of tobacco products in vending machines and within 100 metres of healthcare or educational establishments is prohibited by law. There are no limitations on the online selling of single cigarettes, little packs of cigarettes, or other tobacco goods. Tobacco products cannot be purchased by anybody below the age of 18.

2.b.11 E-cigarettes

E-cigarette sales are permitted. E-cigarette usage, packaging, labelling, advertising, promotion, and sponsorship are all unrestricted.

2.c. Nepal

The consumption of tobacco is one of the greatest risk factors for avoidable and non-communicable diseases (NCDs), which account for a large portion of mortality both internationally and in Nepal. According to the more recent STEPS, Survey 2019 carried out by Nepal Health Research Council (NHRC), 28.9% of adults belonging to (15 – 69) years of age currently use tobacco in any form (smoked or smokeless) and this accounts for 3,800,000 adults. The overall prevalence rate of tobacco use was found to be 36.8% by NHRC in its study conducted between 2016 and 2018. more than 27,100 Nepalese are killed by tobacco consumption-related diseases every year. According to Nepal Demographic and Health Survey (NDHS) 2016, the overall prevalence rate for any form of tobacco usage in Nepal was higher in males (52.3%) than in females (8.4%) of the age group 15-49. The prevalence of tobacco use among Nepali adults is also greater in men (51%) than in women (13.7%), and it is notably rising among children, according to the National Survey on Socioeconomic and Policy Aspects of Tobacco Use in Nepal (NSEPT), which was carried out by NDRI in 2020⁵. According to WHO estimates, in 2015, 21.6% of Nepalese people smoked, compared to 11.6% of people in all low-income countries. Nepal also has a higher prevalence of tobacco consumption than other South Asian nations apart from Bangladesh. Tobacco use is also higher among the poor and illiterate sections of the population and tends to increase with age^{5,6,7}.

2.c.1 Health consequences and economic burden

Every year, on average, 27137 people are killed by tobacco-caused disease, most of them due

Case Study VII

I am Radheshyam Chaudhury, residing in Saptari, Nepal a 42-year-old road construction labour. I forgot the initial incidences of smoking. I can say that if I smoke 2/3 bidis every hour the feelings of hunger do not irritate me. I can continue my work and take the food as the day ends. In this way, I can save the expense of one meal also smoking gives me lots of strength to do this hard work. Sometimes also suffer from a bad cough, then I lower the frequency of smoking but never stop. All my fellow workers also smoke, we sit together, chit-chat, and share our problems with each other. Smoking strengthens our bonding. Smoking is a regular phenomenon in our life. We never talked about quitting or alternatives. Some of us never went to school, we will not understand the alternatives, training etc. We are so busy, will not be able to go anywhere for any counseling. These are useless because I will never quit smoking.

to cardiovascular diseases (CVD) (53%) followed by chronic respiratory diseases (CRD) (21%). Around 12% of deaths from cancers are ascribed to tobacco usage, although cancer cases are not recorded systematically in Nepal at present, and so this may be an underestimate. In Nepal, tobacco-related illnesses claim the lives of 27,100 individuals each year, with lung cancer accounting for 90% of these fatalities. The number of cancer patients in Nepal is increasing every year: according to WHO's country profile on cancer, there were an estimated 10,144 new cancer cases in 2014, and the incidence increased to 26,184 new cases

in 2018, which is an increase of over 150%. Cancer-related deaths are also increasing there were estimated to be 14,300 deaths due to cancer in Nepal in 2014, which had escalated to 19,413 deaths in 2018- a 35% increase.

The health costs of tobacco use are high and include costs for treatment of tobacco-attributable illness and opportunity costs of income foregone through disability and premature death. The projected yearly loss of GDP due to tobacco-related diseases in Nepal is 1.8%, with the direct and indirect economic costs of tobacco use totalling NPR 47.2 billion. The economic cost of smoking (excluding the use of smokeless tobacco) was NPR 22.94 billion (US\$258 million), or 1.5% of its GDP, in 2012 owing to smoking-related sickness, according to the "The Tobacco Atlas" research, which was published in 2018. The costs of tobacco-related ill health fall on both the government and individuals. In Nepal, an estimated 48-69% of health costs in general (so not just covering tobacco-related diseases) are covered by individuals.

2.c.2 Tobacco industry

Surya Tobacco is the market leader in cigarettes in Nepal. According to Surya's 2012 report, they have complete market

control over cigarette manufacture. They had between 82 and 85% of the market's "high" sector while controlling roughly 60% of the bottom segment. Most of these production units were

Case Study VIII

My name is Sunil Chaudhary, I am 27 years old, a resident of Khanjpur village, Nepal. All the members of my house smoke. When I was very young, I saw my grandmother sitting next to my grandfather smoking hookah and conversing very happily. I also started smoking hookah in absence of elders to know the cause of happiness. Later, I developed the habit of smoking bidi with my friends. Now it is a part of my life. We also smoke chillum, and hookah during the festival.

very small and they are often poorly organized. There were five cigarette-producing factories in Nepal. The only one in the public sector was the Janakpur Cigarette Factory which has remained closed since 2011. The four private sector companies are Surya Tobacco Company Pvt. Ltd., Perfect Blended Pvt. Ltd., Nepal Tobacco Pvt. Ltd. and Seti Cigarette Factory.

2.c.3 Legislation for Tobacco Control

The main legislation controlling tobacco control in Nepal is the Tobacco Product (Control and Regulation) Act, of 2010, which governs, among other things, smoking in public places, at work, and on public transportation, as well as tobacco advertising, promotion, and sponsorship, as well as cigarette packaging and labelling. One regulation and three directives were enacted to put the Act's provisions into effect.

- i. The Tobacco Products (Control and Regulation) Regulation, 2068 (2011), is one example.
- ii. The Instructions for Printing and Labelling Warning Message and Graphics in Tobacco Product Boxes, Packets, Wrappers, Cartons, Parcels, and Packaging
- iii. The Tobacco Product Control and Regulatory Directive and the Directive on Printing Warning Messages and Pictures on Tobacco Product Boxes, Packets, Cartons, Parcels and Packaging Materials, all passed in 2014.

As of 2015, all tobacco product packaging must comply with the most recent guideline, which raised the size of the graphical health warnings from 75% to 90% of the front and rear (Nepal, 2022).

On November 7, 2006, Nepal ratified the WHO Framework Convention on Tobacco Control (FCTC) in order to adhere to international standards and guidelines for regulating tobacco use and shielding current and future generations from the devastation that tobacco use causes to society, the environment, people's health, and the nation's economy. The Tobacco Product (Control and Regulatory) Act of 2011 and the National Tobacco

Case Study IX

I am Suman Sing, 49 years old, a resident of Sirha, Nepal. Everyone in my friend circle has a moustache but I do not have a good one. This feeling pricked me all along my teenage. I feel a lack of confidence or a loss of personality due to the absence of a well-developed moustache. Some of my friends also poked me and irritated me by calling me eunuch. Then I started smoking to imbibe some masculine features in my personality. It helped a bit to improve my personality. Moreover, I feel relaxed and confident after smoking. Eventually, it becomes a habit. Now I do not think of quitting smoking.

Control Strategic Plan (2013–2016) have been passed by the GoN in accordance with the WHO FCTC. These measures are intended to restrict, control, and regulate the import, manufacturing, sales, distribution, and use of tobacco products in the nation. The Tobacco Product Act 2011 and signing of international law by the GoN for controlling tobacco consumption shows the government's priority to

- i. Restrict smoking and usage of tobacco at public places
- ii. Ban the promotion and advertisement of tobacco products from any media; and
- iii. Adopt the compulsory display of graphic warnings with the coverage of at least 75 % of a tobacco pack (90% coverage of graphic warning on tobacco product pack is being implemented in Nepal).

At present, the GoN has also increased information, education and communication programs to disseminate information on the dangers of tobacco use. For this purpose, the government is working in close coordination with community health volunteers (female) and various governmental and non-governmental organizations. These legal provisions and awareness programs indicate that Nepal has given high priority to reducing the demand for tobacco within the country. However, supply reduction strategies have been given less emphasis. Whilst the government has prohibited the selling of tobacco to pregnant women and people below 18 years of age and ceased the supply of tobacco from duty-free shops since 2008 to reduce the tobacco supply in the market, there is a significant gap between the recommended tax rate by the WHO and current tax levied by the GoN. MPOWER is the term used to describe the six measures promoted by the WHO FCTC to help countries implement and manage tobacco control. These are as follows: The WHO study (2019) on the worldwide tobacco epidemic states that Nepal has performed well in three of the six MPOWER measures: Nepal has complete policies in terms of smoke-free policies (Protect), health warnings (Warn) and advertising bans (Enforce). However, the taxation policy (Raising taxes) is still weak, and Nepal also needs more effort in cessation programmes (Offer) and monitoring aspects (Monitor) too. The report finds no trend change in affordability of cigarettes and no data on mass media.

2.c.4 E-cigarettes

Nepal, The Tobacco Product Control and Regulatory Directive, 2014 prohibits the sale of e-cigarettes in public spaces and on public transportation, as well as the sale of single units, advertising, sponsorship, and promotion of the product. Products for vaping are nevertheless readily accessible.

2.c.5 Tobacco taxation and prices: In Nepal, 30% taxation rates on cigarettes are amongst the lowest in the region, and significantly below the 70% recommended by the WHO. Latest budgets have begun imposing taxes, and in 2019 there was a health tax. Although prices have risen, tobacco has become cheaper due to salary increases. Smokeless tobacco pouches and single sticks are readily accessible and reasonably priced, even for those with the lowest income levels. Although there is a dearth of information on the specifics of tobacco taxes, a significant difficulty is that government earnings from tobacco are opaque.



Part II

3. Methodology

3.1. Area of intervention and target beneficiaries

3.1.1 Marginal communities

The concept of marginality was first introduced by Robert Park (1928). The term "marginalization" describes tactics used to keep people or groups on the outside of society or to drive them farther out. Peter Leonard describes social marginality as outside the mainstream of productive activity and/or social reproduction activity. This encompasses two groups: first, a limited number of individuals who choose to live on the periphery of society, such as new-age travellers, members of particular religious sects, residents of communes, and some artists. However, in this case, we are focused on a different group—those who are unintentionally socially marginalized. Leonard characterizes these people as 'remaining outside the major arena of capitalist productive and reproductive activity' and as such as experiencing 'involuntary social marginality.' In most cultures, including those in affluent nations, some groups or classes are marginalized; but, in impoverished nations, this marginalization may be more evident. Therefore, it is possible to say that marginalized groups are those that experience unfair treatment or who, in comparison to other age groups or parts of society, rely more on others, making it challenging for them to maintain their subsistence on their own and defend their rights. In addition to this, certain social groups experience marginalization and discrimination. To prevent exploitation, they require specific consideration. Women, children, scheduled castes and scheduled tribes, people with disabilities, migrants, and the elderly are considered to be marginalized or vulnerable groups in developing nations. These people are marginalized and disregarded by society on a social, economic, political, and legal level. All residents should have access to appropriate health care, education, food and nutrition, housing, participation, equitable treatment, and freedom from violence and discrimination, according to the human rights approach. However, the public delivery system frequently ignores and marginalizes these marginalized groups (STs, SCs, children, the crippled, and the elderly), leaving them vulnerable to complex issues with interrelated root causes. These folks occasionally have to endure dual hazards.

3.2. Details of direct beneficiaries

3.2.1 India

For India, we have selected urban slum dwellers, marginal economic communities (people living below the \$2.15 per day working in shipyards, ports and docks of eastern India, staff of International Airport working in no-smoking zones, and urban groups of people. This survey includes economically socially marginalized communities living in urban slums like Kalikapore and Ghuni. Approximately 1.5 million people which is 1/3rd of the entire populace live in various urban slums in and around Kolkata. Urban slum dwellers deal with issues like poverty, illiteracy, unsanitary conditions, and inadequate admittance to healthcare and other services on a daily basis. These obstacles encourage people to smoke or develop other addictions. On the contrary, we have selected a small population from the non-marginalized category to get some contrasting effects on psycho-biological and socioeconomic leverages on

the determinants of smoking habit and quitting success. A community-based quantitative study was conducted among 1222 persons aged 14–79 years in different parts of Kolkata, West Bengal (Ahiritola, Alipore, Bagbazar, College Street, Daspara, Ganguly bagan, Garia, New Garia, Ghuni, Howrah, Jadavpur, Kasba, Kalikapore, Nayabad, Mukundapur, Sovabazar etc.)



Figure 3(1): Survey locations, Kolkata, West Bengal, India

3.2.2 Bangladesh

At least 30 million marginalized people are living in Bangladesh with diverse categories, cultural identities, races and ethnicities. (State of the Marginalised in Bangladesh, Citizen's Platform for SDGs, 2016). Their access to employment is restricted, their means of subsistence

are precarious, and their social standing is poor. Women in this group face additional marginalization and have few recourses to access education, economic opportunities or justice. The marginalized community suffered a lot during and after the COVID-19 pandemic. According to a report published in the financial express, in 2021 said



Bangladeshi marginal community experienced a decline in monthly income by 14-18% during and after COVID-19. Our targeted community in Bangladesh was marginal slum dwellers,

daily labour of different sectors, fishermen, small businessmen of unorganized sectors who live in different rural and urban parts of this country.

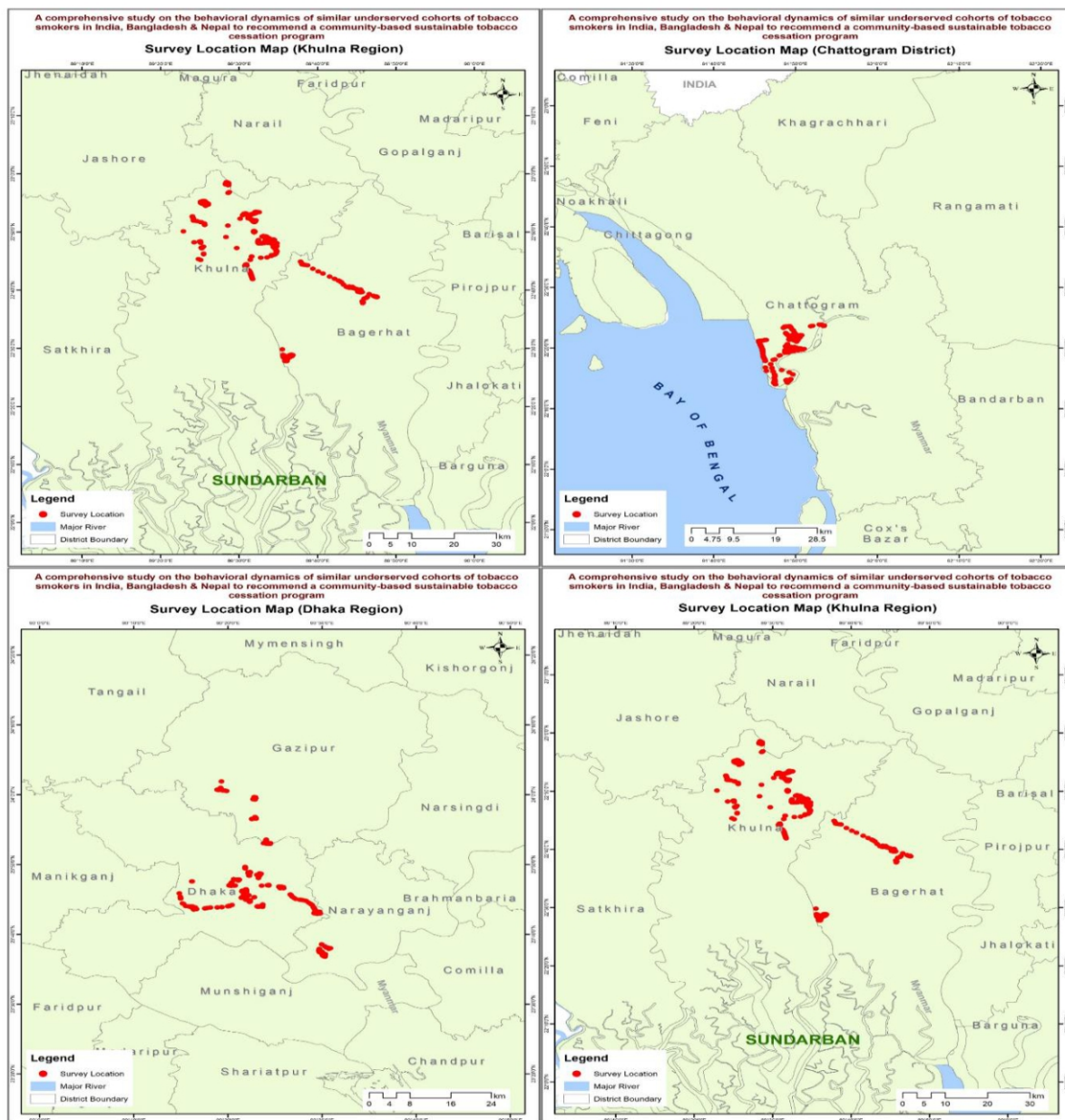


Figure 3(2): Study area map of Bangladesh, where red dots represent survey locations

3.2.3 Nepal

More than ¼ of Nepali (7.05 million) are living below the poverty line. Almost 80% of the janajati (tribal) communities are daily wagers. The tribals who live in the foothills (tarai) of Nepal are the most underprivileged communities in this country. The extreme level of poverty and the absence of minimum facilities like, healthcare, and education makes them vulnerable and socio-economically marginalized. Most of these tribals work in the agricultural fields, and some of them work with the forest department as labour. They are habitual smokers, with smoking playing an integral part in their societal customs. These marginalized tribals were the targeted community in Nepal, this study also includes non-smoker tribals of eastern Himalayan

villages in India-Bhutan border areas. This would reveal and contrast how societal and cultural pressures influence the psychosis of habit formation and how some people are able to not succumb to the pressure. A community-based quantitative study was conducted among 1211 persons aged 13–98 years in Saptari and Siraha district of Nepal (figure 3).

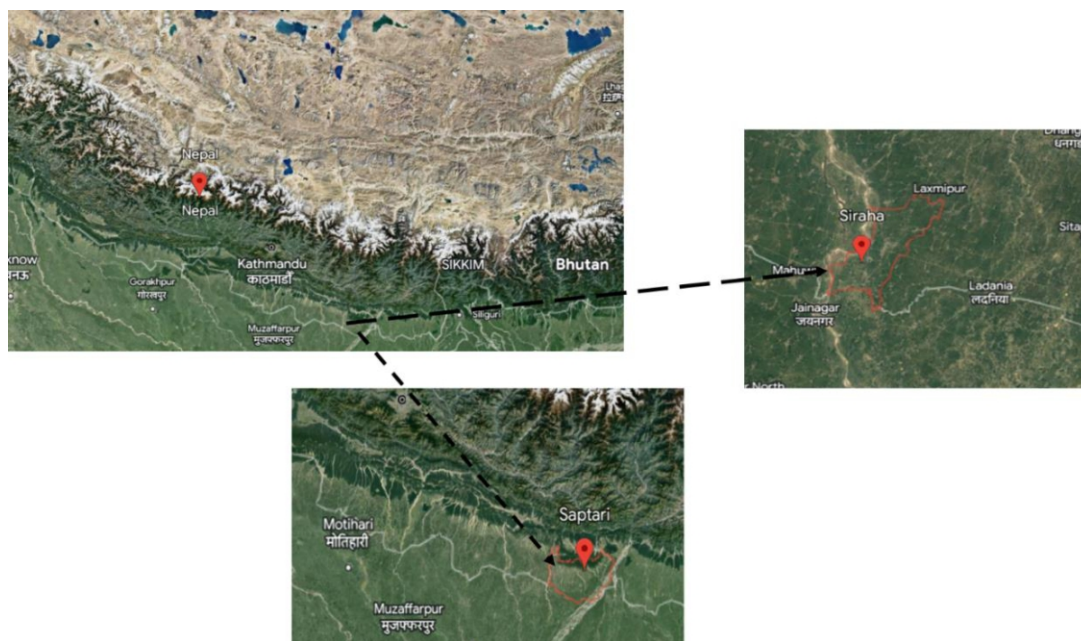


Figure 3(3): Survey locations Saptari & Siraha, Nepal

Table 3(1): Smokers and non-smokers in interviewed sample

| <i>Country</i> | <i>Smokers (%)</i> | | <i>Non-Smokers (%)</i> | |
|-------------------|--------------------|--------|------------------------|--------|
| | Male | Female | Male | Female |
| <i>India</i> | 91.57 | 2.86 | 4.91 | 0.65 |
| <i>Bangladesh</i> | 99.92 | 0.08 | 0.08 | 0 |
| <i>Nepal</i> | 90.74 | 9.26 | 6.59 | 1.25 |

3.3. Developing the assessment tool

3.3.1 Methods of developing the assessment tool

A detailed literature survey and discourses with the experts identified that there are limitations in the existing societal psychometric assessment instruments usually used for identifying the drivers and determinants of smoking habits and possible feasible ways of cessation of the same, thereby discretely indicating the need to develop a new assessment tool. This finding is based, besides the literature, on the priorities, experiences and preferences of the community participants and experts at that time and led to the development of a set of questionnaires. Around **168** literatures were screened in the South Asian smoking context. Amongst them, **85** belong to the peer-reviewed international journal, **30** are of different kinds of reports made by international agencies like WHO, FAO; national reports prepared by national agencies, health departments etc. **26** website reports of different agencies were screened, **27** popular journals' reports, e-newspaper reporting were also taken into consideration during literature survey. The study tool is a classic design for the development of new assessment instruments and the principles of good scientific practice have been the guiding component. The target groups of

the study (marginal worker-class communities living at the bottom of the economic pyramid in both urban and rural set up) were not included in the make of the primary design of the assessment tool so they are not pre-informed about the assessment tool and can manufacture responses, however, though, the open approach of the qualitative part of the study offered opportunities for adaptation based on the participants' preferences and experiences in recruitment and conduction of the study. As the instrument is more intended to support the need for a strategic cohort-specific framework for the cessation of smoking habit and an operational guideline thereto, the interest of individual participants has been relatively low.

3.3.2 Study population, recruitment of respondents and consent

Participating adults of both gender with smoking habits or non-smokers have been recruited through community outreach activities like Focussed Group Discussions, Rapid Rural Appraisal or Key Informant Interviews. For all recruited respondents, Free Prior Informed Consents (FPIC) were taken before interviewing and the aim of the survey interview was explained in detail. For the recruitment of non-smoking adults, urban academic institutes, schools (two in urban regions and two in rural regions), airport lobby, and other non-smoking areas in urban contexts have been approached in order to interview partners.

The individual interviews included community members between the ages of 12 and 57 years, both with and without financial linkages, working, employed or nonworking and self-employed etc. According to the theoretical sampling, the target cases were not determined at the beginning of the research but has been successively recruited in the alternation of collection and development of theoretical categories, with a following further collection. Depending on the level of the category of the cohorts, it has been decided whether a participant from the urban or rural region is to be interviewed or whether an adult man or women with or without smoking habits or chronic respiratory diseases is to be interviewed. The recruitment (sampling) continued until a theoretical saturation is reached, wherein the responses were just repetitions of the previous responses. However, adults with acute illnesses, with complex cognitive impairments or without written consent are excluded. The ability to communicate by voice has been given.

The national experts for participation were recruited from health service units, social sectors and psychiatry. Hereby, extensive contacts could also be made with different societal groups, institutes, organizations and CSOs as well various rehabilitation facilities. We were able to create diverse groups through the focus group configuration, and these groups discussed a range of experiences and impressions. Focus group communication with specialists has shown that a group size of six to eight people works well. Instead of selecting people at random, a specialized technique may be able to better reach that specific audience. Such selection strives for a group dynamic which is considered to be beneficial for the research objective of clarifying the basic understanding of the term (smoking addiction), the understanding of the theoretical construct of smoking as a social abuse of respondents as well as the addiction of the perspective of the cohort in the current study.

3.3.3 Study phase1: Theoretical discourse

3.3.3(a) Collecting data from respondents

Since the theoretical background and the preparation of the category system required detailed knowledge of a cohort and their situation, extensive and detailed interviews were conducted which considered the socioeconomic and psychological circumstances of the individual to provide enough time for the participant to learn and express through semi-structured in-depth interviews. Topic guides have been settled for the interviews, which contain open questions and offer areas of discussion that are addressed in the interviews, without specification of a certain order. The interviews lasted nearly a maximum of 40 min and were audio-recorded with the consent of the participant and completely transcribed afterward in google forms, which were then digitized for quantified analysis.

The age-related problem has been placed into perspective since respondents in this study who are adults starting at the age of 12 are capable of having open dialogues that are interactive, cognitive, as well as verbal. However, during the whole study process, the interviews were tailored specifically to each respondent and their unique preconditions. Moreover, the interview guidance of the respondents has been performed flexibly and carried out preferably by experienced qualitative interviewers to stimulate narration among shy or reluctant respondents. Understanding daily life from the perspective of an adolescent is crucial for the current study because, particularly in regard to respondents' opinions, attitudes, and behaviour, interviews with proxies (such as interviews with parents, friends, or spouses) were insufficient and avoided. To follow the scientific understanding of grounded theory, data collection, preliminary evaluation and theoretical sampling took place in a reflexive process. This procedure was complemented by theory-oriented coding, constant comparison and writing of remarks throughout the data collection process and beyond. The details have been enumerated in the methodology.

3.3.3(b): Preparation and development of a questionnaire guide

Semi-structured questionnaire guides that were developed for individual interviews contained open questions and conversational topics that were thematized without predetermining an order. This allowed the most open conversation technique on sensitive topics, especially conditions and determinants of smoking addictions and cessation of the same. Taking the conversation dynamics into account, the key questions in the research process were modified, revised, and adapted depending on the study cohorts and respondents. The major questions were intentionally left as open-ended despite the established problem dimensions in order to provide participants enough room to express their ideas, explanations, and opinions. The questionnaire guide was based on the perusal of literature reviews, existing evidence and aimed at furthering previous knowledge towards developing a cohort-specific cessation program and then it has been subjected to a pre-test.

3.3.3(c): Questionnaire validation with the specialists and stakeholders

In validating the questionnaire with the specialists and the stakeholders, focus group discussions were mainly used because it is a resource-saving process. With that, the viewpoint of the respondents as well, the perspective of stakeholders and experts were included in the

assessment tool and the same was completed. The focus group was also well-matched for proposition generation and preparation of the questionnaire. The framework is schematically represented in the following diagram. (Figure 3(4))

The respondents and their communities could only assess the current situation in this study, so expert and specialist opinions were crucial. However, the experience of how a smoking addiction may develop and how it can be brought under a cessation programme, both these perspectives, were adequately improved with the inputs of the experts, specialists, and practitioners. The respondents must be equally or similarly impacted by the addiction or exposed to the habit from a methodological standpoint. Within the examined cohorts, the theme statements or messages regarding addiction and its cessations were the main subject of attention rather than the subjects themselves. It is significant to note that the dynamics of the developing group discussions were explicitly taken into account in the analyses because the interaction, discourse, and group processes were crucial in this phase for the formation of opinions as well as the orientation and interpretation of the trends. The idea introductions for the stakeholders' focus groups were based on the instructions for the qualitative interviews, but they were presented from the viewpoint of those who were just incidentally impacted. For instance, a drug user was interrogated from the viewpoint of how passive smoking had affected his or her family. The focus groups of the stakeholders have also taken into account elements from the respondents' individual interviews. The focus group discussions were captured on video for in-depth review and assessment.

3.3.3(d): Analysis of the focus groups with experts and Stakeholders

When examining the theoretical concept of participation, the focus group findings have been contrasted and augmented with the most recent learning findings from easily accessible literature studies. Therefore, the qualitative theme analysis and thematically linked description have been used to analyse the focus group contributions. The discussion guide is first used to create a category system, and then additional categories are created in the subsequent inductive phases using this system. These variables in each cohort comprised the age range, level of economic well-being, and kind of employment, among others. Through summarization, explanation, and organisation, individual assertions are developed and contrasted for this reason. Finally, a compilation of the findings, interpretations, and generalizable conclusions are made. These are combined with the learnings from gathering data from respondents and stakeholders. Utilising a multicriteria decision support system, the data was evaluated and documented.

3.4 Study phase 2

3.4.1 Development of an assessment tool

The questionnaire is also called a test or a scale for assessment and it is defined as a set of items designed to measure one or more underlying constructs that are latent variables. It was viewed as a group of goals for this study that consisted standardized self-report questions, the answers to which were then added together to provide a score. The number attributed to performance on the item, task, stimulus, etc. that creates the data sets for in-depth analysis for this intervention is referred to as the "item score" in this definition. As a result, test development

and data standardization, also known as data norming, are two connected processes where standardisation happens after test development. According to Trochim (2006), the scale development process is accomplished in five phases. 1) Assuming it is unidimensional, define the measured attribute. 2) Create a list of possible Likert questions that may be assessed on a scale of 5 or 7 agree-disagree responses, ideally between 80 and 100. 3) Have a panel of experts score the items on a scale of 1 to 5 to determine how favourably they measure the construct (1 being very negative and 5 being strongly positive). 4) Pick the items you want to keep for the final score. 5) Give the scale a try and reverse any items that measure things in the other way from the rest of the scale (this will change some of the replies on the scale's raw score). The measurement quality of the total score is of special significance since the overall evaluation using an instrument is dependent on the respondent's ratings on all items. Similarly, to accurately measure the score, a 5-point scale is further graded as a 10-point scale for some of the matters that made more closure choices for the respondents and transformed them with double accuracy. Some of the raw scale scores were based on the factor scores while others were based on the unit-weighted sum of the item scores. Using a suitable standardisation sample, such as a normative sample, unit weighted scoring produced standardised scores. The scale score is then standardised and elevated to the previously predicted power. By deducting the mean transformed score from the transformed scale scores and dividing by the transformed score standard deviation, the data sets were standardised or normed. Scores were converted into percentiles, z-scores, or T-scores to make it possible to compare the findings with those from other items. Separate age and/or age-sex norms were taken into consideration for the measuring of traits that differ between males and females or for traits that demonstrate developmental changes. Three stages went into the creation of the participatory evaluation tool: the establishment of drivers and deciding variables, the qualitative review, and the cognitive pre-test. The findings of the qualitative investigation, combined with earlier theoretical considerations and pre-existing instruments, served as the foundation for the drivers and determinants as well as the necessary response scales. The categories from the interviews that are being questioned for the comprehensive development are chosen based on a quantitative 10-point scale. The interview findings are then evaluated to see if they can be effectively mapped by questions from other existing surveys. The creation of the items took into account the focus group research findings. The instrument also includes the expert's advice on the appropriate scale and dimensioning for the practice. Questions are then created for elements for which there are currently no appropriate objects. The items and answer scales are chosen deliberately in the sections that follow. To represent the description, the statements, and the language used by the group of respondents, the items are based as closely as possible on the quotes from the interviews. As a result, a draft of the questionnaire was created.

The second phase involved asking experts (who represented the focus groups) and those who were impacted (respondents and community stakeholders) to examine the instrument and complete a questionnaire before returning it to the researchers. The clarity of the item description, the justification of the potential responses, the content-related fit, completeness, and missing overlaps are of particular importance. A correction was done in response to the criticism, and the created version was added to the cognitive pre-test. The target group's young people from both genders participate in this third stage. With the help of this approach, tips

were once more acquired for the widest range of inquiry issues. The third phase then received the pretested and amended questionnaire for additional use.



Survey at Howrah Station



Survey at Nepal

Questionnaire for Smoker's Socio-scientific Survey in India, Bangladesh and Nepal 2022

Please note: Name of Village _____ Geo-coordinate _____ Date & Time _____

A. Section: Sociometric Survey

- 1) Name of the respondent:
- 2) Age:
- 3) Sex: Male/Female
- 4) Marital status
- 5) Education
- 6) No. of family members
- 7) No. of earning members in the family
- 8) Are you employed? Salaried or self-employed?
- 9) How much do you earn monthly?
- 10) What is the nature of your occupation? (You may select more than one option)
Informal / formal; casual / regular; salaried / business; Government sector / Private sector; primary productivity sector (agriculture/ fisheries/ animal husbandry etc.)/ service providing sector (vendor), local/dislocated; satisfied / dissatisfied
- 11) Do you have any prolonged illness? Yes/No
- 12) Do you have any Chronic obstructive pulmonary disease – Yes/No
- 13) Did you suffer from COVID-19? Yes/No (if yes)
- 14) Do you have any of the following financial coverage? Bank linked, Savings, Insurance (You may select more than one option)
- 15) Do you have health insurance? Yes/No (if yes)
- 16) Type of Insurance (Private/ Government)/ Individual/ family/ group

B. Section: Smoking History & Behaviour

- 17) Are you smoker? Yes/No
- 18) If yes, then nature of your smoking? Chain smoker/ Regular/ Occasional/ Seldom
- 19) At what age did you start smoking?
- 20) Since when did you form the habit of smoking?
- 21) How many in family are smokers? _____
- 22) Do you / anyone of your family members chew tobacco? Yes/No
- 23) Have you ever quit smoking? Yes/No
- 24) If yes, When, and how many times?
- 25) Why did you quit (what are the reasons?)
- 26) Why you resumed? _____
- 27) What do you smoke? Bidi, Cigarette, Chillam, Hukkah (You may select more than one option)
- 28) Do you have any other addiction? Yes/No
- 29) If yes, then what? Alcohol / rice wine / Khaini / Gutkha / Drugs / Others _____
- 30) Which one do you consume more? Tobacco / Other than tobacco
- 31) Are you aware of health risks of smoking? Yes/No
- 32) If yes, then have you tried to quit? Yes/No
- 33) What would have helped you in quitting: Getting money / savings / cessation services / advisory and counselling / any other incentives
- 34) Did you quit smoking after COVID? Yes/ No
- 35) Have you tried alternatives? Yes/No
- 36) Do you know there are alternatives available for quitting smoking? Yes / No
- 37) Have you heard of Nicotine Replacement Therapy (NRT) / e-cigarette / chewable / mint / any other therapy
- 38) Have you experienced any awareness or training to quit? Yes/No

- 1) Have you attended any workshop on cessation of smoking or THR organized by the government / non-government organizations / health organizations: Yes / No
- A. Section: THR – Cessation and Choosing Tobacco Alternatives (TOPSIS Study based on MAUT)**
If you are to choose an alternative to tobacco, what would you need in lieu? Here are some suggestive options, grade them in 1-10, as 1 being the lowest need and 10 being highest.
- 2) I must get counselling to discard smoking and / or accept alternatives.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
- 3) I must get medication to discard smoking and / or accept alternatives

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
- 4) Cost of cessation or alternatives to tobacco must be affordable to me.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
- 5) The cessation program and the alternative solution must be at hand and easy to access.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
- 6) I must get the comfort of my mind and health after accepting the cessation program or alternative solution.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
- 7) Joining the cessation program or adopting to the alternatives must not impact my social stature or societal credibility.

| | | | | | | | | | | |
|---|---|---|---|---|--|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|--|---|---|---|---|----|
- B. Section: Motivational Factors in quitting the habit of smoking**
- 8) Do you know about any ongoing cessation service or program in your locale: Yes / No
- 9) If Yes, how motivated do you feel to join the same

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
- 10) Do you think, the National Tobacco Control Program is effective in your country?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
- 11) Do you think there can be some process, method, or service to help you to quit your smoking habit Yes / No
- 12) If Yes, what are the factors that really motivates you to join the above and quit smoking. Mention first three on the basis of priority
a) _____
b) _____
c) _____
- C. Section: Psychometric Tests + FTND (Mark the strength of feelings from 1(min) to 10 (max))**
- 13) Do you have addiction or feel cravings for Nicotine?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
- 14) Do you think that smoking habit gives a social status or facilitates social position?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
- 15) Does smoking acts like a physical stimulator? (You feel energetic, enthused, happy)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
- 16) Does smoking reduce your boredom?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
- 17) Does it reduce your mental negativity? (Loneliness, hopelessness, anger, frustration)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
- 18) Does it manipulate your sensory motors? (Taste, smell, touch, vision or hearing)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
- D. Section: Vulnerability Study**
- 19) Have you been exposed to any of these? (Grade all as 1-5, 1 being the least exposure):
Environmental disaster () ; Health hazard () ; Occupational hazard () Others ()
- 20) How adversely have you been impacted? () Grade as 1-5, 1 being least impact.
- 21) Have you been exposed to any stress? (Grade all as 1-5, 1 being the least stress):
Societal stress () ; Economic stress () ; Emotional stress () .

Figure 3(4): The questionnaire, assessment tool

3.5 Study Phase 3: Implementation into the practical work

The recently created questionnaire was used in two practise areas, one each in the urban and rural settings, where marginalised groups thrive. at order to identify how the questionnaire should be used, the implementation is carried out through workshops at the facilities. The study's preliminary findings are presented during these sessions. With professionals including doctors, psychologists, physiotherapists, and occupational therapists, the practical consequences are explored. The surveys and their application were also presented.

3.6 Study Phase 4: Pilot study with testing of reliability and validity

The questionnaire was evaluated in the targeted field during the pilot project, including slums, hamlets in the periurban area, dockyards and ports, airport premises, as well as with respondents who did not smoke.

A brief questionnaire was used to conduct an interview with the respondents in the practise and ask them about how the assessment was handled as well as how the results of the questionnaire were used to create the campaign and the framework for the cessation programme. In order to get the best return rate possible during the surveyor's normal working day, the survey was conducted using a quantitative questionnaire with ready-to-use response alternatives. The pilot research yielded 250 targeted replies from each nation. Finally, different subscales were identified by exploratory factor analysis utilising the data from the pilot research. Content validity, discriminating validity, and primary concept validity techniques were all used in the validation testing. However, with more research and methodical assessments, the validity check has been promoted.

3.7 Ethics and dissemination

The Helsinki Declaration's tenets and the guidelines for good scientific practise were followed in conducting the study. All respondents received prior information regarding the scope, methodology, and processing of the data acquired from the study. Prior to the study, the surveyors had free, prior informed permission from each participant. The surveys were optional, and participants were free to opt out at any moment. In certain situations, previously obtained data has been erased. Absence of involvement continued to have no negative effects. Pseudonymization has been used for all personal identifiers. It presented findings from the perspectives of respondents, members of their community, and experts on the theoretical underpinnings of the concept of participation. The study was focused on the development of a participation measurement instrument for respondents, one of the most urgent care requirements in social abuse management and rehabilitation. The programme was subsequently translated for practical purposes into regional dialects like Bengali and Nepali. The findings will be preserved in an open access database and may now be applied to designing rehabilitation or cessation programmes as well as future research and development projects. When creating and/or employing the instrument, the surveyors and interviewers were mindful of the respondents' ethnic and religious sentiments.

3.8 Cohort selection

In India, we have chosen Syama Prasad Mookerjee Port, Kolkata and Netaji Subhash Chandra Bose International Airport, Kolkata as important stakeholders as many labourers work there in

the smoking prohibited zone and in the open area. To assess the effect of rules and regulations on this cohort we signed MoU with these stakeholders for ease of our work. Stakeholder discussions were conducted with Chittaranjan National Cancer Institute (CNCI), Dr. R Ahmed Dental College & Hospital in Entally, Kolkata, Office of Kolkata Corporations, Ward offices for grounding the survey, key informant interviews and selection of target beneficiaries. In Bangladesh, we performed MoU with O.Creeds and Sushilan for the selection of sites and surveys as their organization mandate satisfies the objective of this project. Stakeholder meetings were conducted with IUCN, Dhaka, British American Tobacco (BAT), Akij Bidi, Department of Environment, Dhaka Region for scenario analysis and key informant interview. In Nepal, MoU was signed with SABAL Nepal as country partner for every kind of support during grounding of the project. A series of stakeholders' meetings were conducted with the Forest department (Sirha and Saptari range), Beat offices, District administration, Block administration, Army heads, Police heads for analyzing the policy practice gap among smokers' cohorts.

3.9 Analysing the survey output

A semi-structured and validated questionnaire was used during the face-to-face interviews. KOBO toolbox software was used for field data collection during the survey in Bangladesh. Google Forms were used for field data collection during the survey in India and Nepal.

The following statistical methods have been used to understand for identifying the psycho-biological and societal drivers and determinants of the smoking habit in economically and socially marginalized and vulnerable smoker cohorts of India, Bangladesh, and Nepal

3.9.1 The Fagerström Test for Nicotine Dependence (FTND)

The FTND is a recognised tool for determining the degree of physical dependence on nicotine. An ordinal measure of nicotine dependency in relation to cigarette smoking was intended to be provided by the test. It has six components that assess smoking frequency, dependency, and amount of use. Multiple-choice questions are scored from 0 to 3, whereas yes/no questions are rated from 0 to 1. The components are added up to create a final score between 0 and 10. The patient's physical reliance on nicotine is more acute the higher the overall score. The FTND test may be used in the clinic by the doctor to record the circumstances under which a medicine to treat nicotine withdrawal should be prescribed. Karl-Olov Fagerström was the person who created the Fagerström Tolerance Questionnaire. Todd Heatherton, et al. adapted this test to take the form of the Fagerström Test for Nicotine Dependence in 1991⁸.

3.9.2 ELimination Et Choix Traduisant la REalité - ELimination and Choice Expressing the Reality (ELECTRE)

ELECTRE is a family of multi-criteria decision analysis (MCDA) methods that originated in Europe in the mid-1960s. It is used to eliminate certain undesirable solutions to the issue. The ELECTRE family of approaches are primarily intended for multiple criteria decision-aiding (ELimination Et Choix Traduisant la REalité, or ELimination and Choice Expressing the REality). These approaches employ an outranking relation on the set of activities as a preference model; it was created as a result of concordance and non-discordance tests utilising particular input preference data.

3.9.3 TOPSIS Study based on MAUT

TOPSIS uses the multi-attribute utility theory method (MAUT) and the order of preference technique based on the similarity to the ideal solution (TOPSI) as a calculation method to produce output and determine the level of accuracy of each method. The test in this study contrasts real data testing with the outcomes of computations on the system using a confusion matrix. The accuracy of the MAUT approach is 94.28%, while that of the TOPSIS method is 35.71%, according to the results of system testing employing these two methodologies. Due to its simplicity and underlying idea that the best solution is the one that is farthest from the negative ideal solution and closest to the positive ideal solution within the Multiple Attribute Decision Making (MADM) domain, the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) (Hwang and Yoon 1981; Yoon and Hwang 1995) is highly regarded, applied, and adopted MADM method. Since subjective weight may not always be possible and attribute weight is used differently than the TOPSIS while addressing MADM issues, a modified TOPSIS variation was created (Deng et al., 2000). This variant uses an entropy-based objective weight elicitation mechanism. A variety of researchers and practitioners have used the TOPSIS and the modified TOPSIS for MADM problem-solving. One method used in multi-criteria decision making (MCDM) is the multi-attribute utility theory (MAUT). It was introduced by Fishburn (1965,1970), Keeney (1969,1971,1973), and Raiffa (1969) who proposed a decision-making technique designed for taking decisions under risk. The theories, concepts, and ideas of MAUT can help an individual in rational decision-making. This method handles the problem of deciding in different logical and meaningful manners⁹.

3.9.4 Vulnerability Study

It is the procedure for locating, estimating, and prioritizing (or rating) a system's vulnerabilities. Information technology systems, energy supply systems, water supply systems, transportation systems, and communication systems are only a few examples of systems for which vulnerability assessments are carried out. Organizations, from tiny firms to significant regional infrastructures, may commission such audits. Vulnerability from the disaster management perspective means assessing the threats from potential hazards to the population and infrastructure. It may be conducted in the political, social, economic, or environmental fields. vulnerability can be expressed as $Vulnerability = f(\text{exposure} + \text{sensitivity} - \text{adaptive capacity})$; wherein exposure refers to the magnitude and duration of the exposure to extremities like health hazards, economic stress, societal inequity, and psycho-biological factors. Sensitivity is defined as the grade to which an arrangement (in this case both humans and the community) is pretentious, either unpleasantly or constructively, by the variability or ensuing change.

4. General Findings and Need Assessment Studies: Inferences and Outcome

4(a): Tobacco smoking prevalence in women

Tobacco use is pivotal in perpetuating health inequalities among different socioeconomic groups and genders. Women tobacco users not only share the same health risks as men but are also faced with health consequences that are unique to women, including those connected to pregnancy and cervical cancer. Many historically marginalized populations continue to smoke at advanced levels and/or have superior trouble for quitting than less marginalized groups. A

recent review suggests that women may have a more difficult time achieving smoking cessation success than men⁸. In addition, a well-established body of literature compellingly demonstrates that individuals with lower socioeconomic status (SES) are less successful at quitting⁹. This effect has been shown across multiple indicators of SES such as income, employment status, education level, financial strain, and subjective social status. The majority of research on smoking cessation disparities has, crucially, concentrated on a single marginalised sociodemographic characteristic, such as SES or gender. Although focusing on a single attribute prevents the examination of heterogeneity within marginalised groups or how multiple aspects of a person's identity may confer disadvantage, attention to broad group differences is essential for understanding population trends (i.e., cessation differences based on the level of SES). In other words, individuals possess multiple sociodemographic attributes that may place them at both increased and decreased risk for health inequities, such as their race and ethnicity, gender, SES, religion, mental health status, sexual orientation, and more.

4(b) Tobacco cessation and multi-stakeholders' partnership

The primary tool for tobacco control is a comprehensive and active awareness of the population about the ill paraphernalia of tobacco usage, with special emphasis on all aspects of this impact, i.e., social, physical, financial and environmental. In the 1960s, when the word 'Prevention' was added to the health discourse, the concept referred to a multipronged approach to disseminate warnings about products and practices that health professionals considered potential health hazards along with educating the youth through school curricula. Efforts made by the government and nongovernmental organizations (NGOs) for educating the community on issues related to tobacco control have intensified in the past few years. Well-conducted research globally has established that it is essential to reduce the demand through such education married with changes at the policy stratum, which also serves to countervail the industry's efforts to promote tobacco. These mass education efforts along with policy changes are targeted at reinforcing and changing the social norms towards no tobacco use. The Centers for Disease Controls (CDC) best practice guidelines suggest that public education is an vital part of the efforts to both prevent the initiation of tobacco usage and encourage tobacco cessation.

This study has provided a detailed survey report of the vulnerable smoker cohorts of India, Bangladesh and Nepal assaying the determinants of smoking habit by identifying psycho-biological and societal drivers. This study has also recommended a cohort-level sustainable tobacco cessation program, based on empirical research evidence and multi-criteria decision analysis. It also comprises a literature review of the current best-practice recommendations by international/national public and private entities for comprehensive tobacco harm reduction and cessation. The detailed study design for assessing the unique needs of vulnerable smokers' cohorts with completed study instruments tested in a focused/targeted community has been discussed in the result section in a detailed manner.

In India, we have chosen Syama Prasad Mookerjee Port, Kolkata and Netaji Subhash Chandra Bose International Airport, Kolkata as important stakeholders as many labourers work there in the smoking prohibited zone and in the open area. To assess the effect of rules and regulations on this cohort we signed MoU with these stakeholders for ease of our work. Stakeholder

discussions were conducted with Chittaranjan National Cancer Institute (CNCI), Dr. R Ahmed Dental College & Hospital in Entally, Kolkata, Office of Kolkata Corporations, Ward offices for grounding the survey, key informant interviews and selection of target beneficiaries. In Bangladesh, we performed MoU with O.Creeds and Sushilan for the selection of sites and surveys as their organization mandate satisfies the objective of this project. Stakeholder meetings were conducted with IUCN, Dhaka, British American Tobacco (BAT), Akij Bidi, Department of Environment, Dhaka Region for scenario analysis and key informant interview. In Nepal, MoU was signed with SABAL Nepal as country partner for every kind of support during grounding of the project. A series of stakeholders' meetings were conducted with the Forest department (Sirha and Saptari range), Beat offices, District administration, Block administration, Army heads, Police heads for analysing the policy practice gap among smokers' cohorts.

4(c): Policy Analysis (Smoking Habit Addiction)

From the study and research being undertaken herein, there is no iota of doubt that the efforts to bridge this widening policy gap and the undernourished policy framework for building a smoke-free world through an effective cessation program are grossly lacking. This brings up the need for analysing the policy scenario with an inclusive lens that covers the vulnerable marginal communities.

Policy frameworks in this regard, in all three countries, have been accepted either in the first international treaty on tobacco control in the World Health Assembly in 2003 or as a follow-up measure of the WHO Framework Convention on Tobacco Control (FCTC). The government of India first ratified the same, following input from national public health experts, and passed the legislation called 'Cigarettes and Other Tobacco Products Act (COTPA)', which not only became the main legal framework in India that regulates production, distribution, sales and usage of tobacco products in the country but also enunciated the tobacco control regulations in Nepal and Bangladesh. Today, after 15 years after signing the treaty, the number of published policy analysis addressing tobacco control in all these three nations meager, even though there has been noteworthy analysis work done in China and Brazil. This too, makes the need for a policy analysis most imperative. Perusal of the policy regulations in these countries show minor changes in the structural framework and Bangladesh and Nepal mostly follow the Indian regulations though the same is either ratified much later, as in Nepal or ratified more unwillingly as in Bangladesh. Therefore, the contradictions and gaps are mostly common in all these regulations.

Globally, smoking has been recognized as one of the major community health challenges of this century and a deterrent to the success of the United Nations Millennium Development Goals. India, being home to nearly 275 million tobacco users and the world's second-largest consumer of tobacco is a crucial stakeholder to the WHO FCTC. However, India's tobacco problem is complex and unique due to the extensive production and varied usages of forms of tobacco. This is equally true for Bangladesh and Nepal, but challenges are even sharper owing to the oversimplification of the norms and regulations. Hereafter the policy lacunae in addressing this complexity are briefly discussed with a focus on the required policy framework for an effective cessation program.

Till date, COTPA (2003) is the only main legislation controlling tobacco goods in India, whereas in Bangladesh and Nepal regulatory structures are mostly aligned to COTPA. Its key provisions include ban on smoking in public spaces, prohibition on advertisement and promotion, sale to minors, health warnings on packaging and testing of tar and nicotine content, etc. Additionally, the Ministry of Health and Family Welfare launched the National Tobacco Control Programme in 2007 to facilitate compliance to FCTC and the spent till date has been INR 352,000,000 (US\$ 5.2 million) though the programme remained limited in terms of its coverage across socioecology and economic cascades in the society. Such provisions are not even available in the other two countries and moreover the regulations there are not that stringent and allows wider escape passages. Assuring protection from exposure to tobacco smoke, the Framework Convention Article No. 8, recommends providing protection against exposure to second-hand smoke in community spaces, factually known as passive smoking and smoking is therefore completely banned in most public spaces, such as workplaces, hospitals, educational institutions, trains, etc. However, the law permits a smoking room in airports, hotels and restaurants housing more than 30 people, who can be victims of passive smoking as well. During our visits to Airport Authority of India in Kolkata or Kolkata Port Trust, Haldia Port Authority, this issue was reluctantly addressed by both administrative officials and health in-charge of the premises. The penalty amount for smoking in a public place is too less and quite affordable for the commons who usually smoke in crowded public places, taxis and open spaces. The smoking ban does not cover 100% of all open spaces, which is the biggest gap between the treaty expectation and the law. In the opinion of the respondents, the current law shows a discrepancy by banning only smoking, but not other chewable tobacco in public places. In the participant observation conducted in our study, students were smoking right outside the college campus and all the food stalls located outside were found selling cigarettes and other tobacco products. This verifies the finding that smoking in community spaces is not strictly banned, and tobacco is freely being sold within the vicinity of educational institutions. The WHO FCTC, however, acknowledges this gap and makes smokeless tobacco a significant part of their 2025 goals. Enacting a complete ban on all forms of tobacco use in public places along with an adequate penalty imposition has been a common policy recommendation from respondents in order to protect exposure to passive smoking and reduction in overall use of tobacco in public places. With regard to packaging and labelling of tobacco goods, the FCTC treaty's article No.11 regulates the packaging and labelling of tobacco to presage consumers about its ill effects. Recent amendment of the government has made it mandatory to place health warning labels both in pictures and written to cover 85% of the product packaging on both sides. The government also bans the use of misleading information on packaging, such as 'light', 'ultra-light', 'low tar', etc though implementation of this mandate remains weak due to business-friendly policy gaps, such as availability of unpackaged cigarettes, or the wrapping of smokeless tobacco commonly used in countryside spaces that do not always stand illustrative cautions and also the cigarettes available in the market with names like 'light', 'smooth', 'mild' etc. Obviously, the interpretation of the warning images by the uneducated populace remains questionable. Majority of the respondents (72%) in this sample study felt that the package labelling and movie warnings are not operative in controlling the use of tobacco products in addicts. A few of the respondents (14%) though pointed out that they prefer to buy loose cigarettes so that they can avoid the pictures on the packets.

In another policy segment, Article 13 of the FCTC, wherein advertising, promotion and sponsorship of tobacco products has been dealt with thoroughly, the concern of the required implementation of a comprehensive ban on tobacco advertising, promotion and sponsorships has been raised by the stakeholders and administrators during the FGDs. Though the Indian law enforce a ban on direct advertising through most forms of mass media but it does not comply with the treaty entirely as it allows point-of-sale advertisement in shops and does not completely ban sponsorships by tobacco companies, as well. Apparent reasons for being reluctant in policy implication might be the huge tax revenues earned by the government from these. The amended rules definitely regulate the depiction of tobacco use in the media in collaboration with the Central Board of Film Certification. However, tobacco companies continue to use legal loopholes in the form of surrogate advertisement and brand diversification. Respondents too are aware of such windows to select their brand or products. It is important to mark here that tobacco companies continue to sponsor cultural and even religious events, newspapers and magazines, popular shows and hold a prominent place in the Indian advertising world. Most of the respondents in our study reported that they ignore on-screen warnings about the ill effects of tobacco during the portrayal of smoking at the cinema. India experienced a rise in showing on-screen smoking when measures were implemented to control other advertising mediums for tobacco companies. WHO bulletin on this issue also emphasizes the need to control the portrayal of such smoking on screen in movies and other programmes. Regulations for the prohibition of sale of tobacco products to and by minors, as per Article 16 of the Framework Convention treaty though very loud and clear, yet India faces a huge conflict in complying with this treaty requirement. Currently, the tobacco law prohibits sales to individuals under the age of 18. Additionally, it prohibits sales through any vending machines and within 100 yards of educational facilities. In order to prevent children from easily accessing tobacco goods, it also outlaws their display at places of sale, as well as the handling and sale of tobacco products by minors. However, compliance remains a major challenge due to the huge amount of child labour being engaged in tobacco manufacturing, widespread sale of loose cigarettes and bidis attracting young users and displayed kiosks of tobacco inside shopping malls, supermarkets and restaurants. The Global youth tobacco survey for India indicates that the proportion of minors purchasing tobacco remains unchanged¹⁰. In the present survey exercise, it is noted that 86% of minors were able to buy tobacco without being refused sale due to their age, on the pretext that they might be purchasing it for someone, who is an adult. In other studies done by the WHO, it has been reported that laws restricting access to tobacco products have been failing as young people are reported to have easy access to tobacco. It is also assumed in our study that easier access to tobacco product for use rather than that of any cessation program or product to prevent smoking is another policy bottleneck. The participant observation has clearly revealed that access to cigarettes is not controlled in urban markets and age is not verified before selling tobacco products to students.

There are other gaps too, those are equally significant in this context. It is revealed that there is no direct provision in the law to promote public awareness on tobacco smoking or its cessation provisions. Under the National Tobacco Control Programme, US\$ 5 million is allocated every year to implementing public awareness, mostly delivered through mass media but the coverage and effectiveness of such campaigns in rural India is absent. Since, peer

influence came out as a major factor for the youth to start smoking, there must be legal provisioning to reverse this impact by preparing peers who would act as anti-tobacco champions in schools, the same peer pressure can probably be used as a protective factor. Tobacco education needs to be legally integrated from school levels, which are the foundation years for forming negative or positive opinions. The most important legal gap lies in the fact that currently the society lacks built capacities to provide tobacco cessation services. There are only a few cessation centres providing limited coverage and suffering from a high loss of follow-ups. Nicotine replacement items and cessation drugs are available but they are not covered under the national health insurance. Progress on this keeps declining and only 7.4% of smokers can recall having received cessation advice from either medical practitioners or counsellors. According to WHO data, healthcare practitioners in India give as little as 9.2% of counselling and 4% of help for quitting medication. The overall knowledge about tobacco and its ill effects in healthcare students and health professionals have also been found to be low¹¹. This translates to the lack of counselling and cessation support being offered to young people in the country. In our study, none except one respondent knew about tobacco cessation clinics. In addition, none of the students reported that they had received any counselling or support to quit smoking. This verifies the complete lack of cessation support in communities. For an effective and sustainable intervention, tobacco control needs to be integrated in all health and development agendas of the government. Integration of tobacco control strategies, especially awareness and cessation support with primary and secondary level healthcare delivery is critical to the success of COTPA and the National Tobacco Control Programme. Integration of tobacco control with primary healthcare will not only ensure increased coverage of the rural, uneducated and low socio-economic classes but also better utilise available resources.

Most of the study participants believed that the current tobacco control measures such as package warning, movie warnings and pricing and taxes are not effective in stopping tobacco use. With respect to these measures, four specific patterns emerged as discussed below. The students taking part in this study reported that they had never faced any issue with respect to accessing cigarettes. While most of them started smoking prior to the age of 18, they could easily access cigarettes from shops located around their schools and colleges or from their family members. One of the crucial findings of this research was around the perception of youth about the warning on the packages and warnings shown in movies. A majority of students in this study strongly felt that the pictorial warnings may be scary and disgusting to look at, but they have no effect whatsoever on the smokers.

Overall, most of the respondents had knowledge about cancer being caused by tobacco and smoking. While many students couldn't tell anything beyond tobacco causing cancer, very few had detailed knowledge about other ill effects such as chronic diseases, passive smoking, etc. Two distinct themes came out where one group strongly believed the ill effects to be true regardless of whether they smoked or not; the others were not sure of the ill effects. This group of respondents could identify and believe cancer (in most of cases) and lung diseases, asthma, other high-risk behaviour, and addictions (in a few of the cases) as the ill effects of tobacco. A number of factors contributed to their knowledge of harmful effects, such as self-education from the Internet, knowledge from a family member who's a smoker and a history of family illness due to smoking. There were a large proportion of students who did not

believe that tobacco causes cancer or other diseases. Furthermore, many of these non-believers also thought that tobacco, if consumed in small quantities, is not harmful at all to health. The primary source of such belief was the fact that they had not seen anyone suffering from cancer, who had been a smoker.

The students, who believed that the current measures work only to some extent, discussed many things about the possible tobacco control strategies. A suggestion was to integrate tobacco education in schools. Completely banning tobacco came out to be a strong suggestion from many but some of the students also pointed out that people might resort to other forms of addiction if the banning is not done properly with adequate cessation help.

To fight the war against tobacco, several policy measures for tobacco control are being put into place on a national and worldwide level. However, because nicotine in tobacco is highly addictive and makes quitting difficult, the present tobacco user may not immediately benefit from these activities. By 2050, it is predicted that a shortage of cessation assistance will contribute to an additional 160 million smoking deaths worldwide. A majority of tobacco users (nearly 70%) wish to quit the habit, but only 3–5% actually succeed in doing so, leading to a conclusion that along with all the tobacco control laws we need to develop some cessation techniques and try to implement them in ground levels to get tobacco-free society in future.

Reviewing the policy perspectives of the respondents in this study the following inferences and policy gaps could be drawn, which are as hereunder.

- Majority of the respondents (72%) in this sample study felt that the package labelling and movie warnings are not being effective in controlling the use of tobacco products in addicts. A few of the respondents (only 14%) though pointed out that they prefer to buy loose cigarettes so that they can avoid the pictures on the packets, rest had no impact of the visual warning printed on the packets of the cigarettes.
- Though the Indian law enforce a ban on direct advertising through most forms of mass media but it does not comply with the treaty entirely as it allows point-of-sale advertisement in shops and does not completely ban sponsorships by tobacco companies, as well our respondents too were found to be aware of such windows to select their brand or products. Most of our respondents (73%) indicated that they ignore on-screen warnings about the ill effects of tobacco during the portrayal of smoking at the cinema. Even, there is no direct provision in the law to promote public awareness on tobacco smoking or its cessation provisions. The most important legal gap lies in the fact that currently the society lacks built capacities to provide tobacco cessation services. There are only a few cessation centres providing limited coverage and suffering from a high loss of follow-ups. In our study, none except seven respondents knew about tobacco cessation clinics. In addition, none of the respondents reported that they had received any counselling or support to quit smoking. This verifies the complete lack of cessation awareness support in communities.
- Most of the study participants believed that the current tobacco control measures such as package warning, movie warnings and pricing and taxes are not effective in stopping tobacco use. A majority of students in this study strongly felt that the pictorial warnings

may be scary and disgusting to look at, but they have no effect whatsoever on the smokers. This is a crucial policy gap in implementation.

- With respect to these measures, four specific patterns emerged as discussed below. The students taking part in this study reported that they had never faced any issue with respect to accessing cigarettes.
- Overall, most of the respondents had knowledge about cancer being caused by tobacco and smoking. While many respondents couldn't tell anything beyond tobacco causing cancer, very few (12%) had detailed knowledge about other ill effects such as chronic diseases, passive smoking, etc.
- Two distinct themes came out where one group strongly believed the ill effects to be true regardless of whether they smoked or not; the others were not sure of the ill effects. This group of respondents could identify and believe cancer (in most of cases) and lung diseases, asthma, other high-risk behaviour, and addictions (in a few of the cases) as the ill effects of tobacco.

The respondents, especially youth, who believed that the current measures work only to some extent, discussed many things about the possible tobacco control strategies. A suggestion was to integrate tobacco education in schools. Completely banning tobacco came out to be a strong suggestion from many but some of the youngsters also pointed out that people might resort to other forms of addiction if the banning is not done properly with adequate cessation help.

5. Result and discussions

Section A: Sociometric Survey Results

A(1): India

General reviews of the findings from survey and research studies in India revealed that the prevalence of smoking is higher among smokers at the bottom of the economic pyramid and as well among marginalized cohorts working in the informal sector mostly. Significant differences exist between smoking habits of people from higher and lower socioeconomic strata, wherein the smokers in the higher income groups are addicted by habit and the marginalized groups too are addicted, but by circumstantial compulsions. In both groups, youth and individuals in their adolescents are more prone to tobacco addiction. Veteran smokers from higher socioeconomic status seemed to face enhanced social pressure to abandon smoking, and may even become socially isolated for their addictive habit, which resembles with the previous findings of Christakis and Fowler in 2008, suggesting a uniformity in trends. It has also been observed that urbanites, of both genders, having limited or restricted social association are more susceptible to smoking habit, whereas individuals from the marginalized cohorts smoke more under stressed situations or during enduring physical work pressure. They, however, possess fewer satisfying associations with other smokers and neither feel the societal thrust of quitting owing to dearth of resources, alternatives and counselling opportunities that promote healthy living and help avert smoking. In the sample study and survey of the marginalized cohort thriving in periurban shanty towns around the metropolis of Kolkata, almost 1600 individuals

were randomly approached, and 1222 individuals responded to the survey, of whom only 43 were female respondents. The respondents were mostly (66%) working in the informal sector or self-employed. Results reveal that 94% of the surveyed sample are smokers and 96% of the smokers are male. 35% of the smokers belong to the younger group (<30 years) and 42% are middle-aged between 31-50 years. Remarkably, 1% among them is minor having age below 18 years. Those women who responded to the survey, 81% of them are smokers and they belong to the age group 18-30 yrs. The survey research results tally with recent findings that indicate higher prevalence of smoking habits in the less educated persons and manual workers, as it is perused that 74% of the smokers fall in less educated category, mostly having no formal education and only 9% with high school education.

Table A1: Response of the population against health issues

| <i>Questions</i> | <i>YES (%)</i> | <i>NO (%)</i> |
|---|----------------|---------------|
| <i>Do you have any prolonged illness?</i> | 12 | 88 |
| <i>Do you have any Chronic obstructive pulmonary disease?</i> | 8 | 92 |
| <i>Did you suffer from COVID-19?</i> | 10 | 90 |
| <i>Did you quit smoking after COVID?</i> | 4 | 96 |
| <i>Do you have health insurance?</i> | 60 | 40 |

When smokers were asked about health-related issues, in this survey, it came out that 82% of them do not have any chronic illnesses and 92% of smokers didn't have complaints about any pulmonary disease, especially due to their smoking habit. This was, in entirety, based on their perception of health conditions and not based on any medical assessment and it indicated that health awareness is grossly lacking amongst this group of smokers and fiscal constraints limit their access to health services like advisories or check-up. On another aspect, it has also been found that, 71% of the married population in the surveyed sample have the habit of smoking tobacco. 47% of our surveyed population works in the formal sector and rest in the informal sector but there has been no demonstrable trend in their smoking habit with respect to the means of livelihood neither any striking difference, except for the fact that circumstantial intimidation to stimulate the habit of smoking in these two cohorts are differently oriented, for example, 59% of the surveyed smokers are self-employed individuals of the cohort, working in informal service sectors or have self-owned micro-enterprises and usually yield to smoking to get relieved of circumstantial stress, whereas rest 41% of the surveyed smokers are in formal sector and practice routine smoking of tobacco, more like a lifestyle habit. A more detailed discussion on the behavioural patterns and history of smoking habits are presented in the following paragraphs.

A(2): Bangladesh

Our sample survey, approaching nearly 1500 individuals, could get responses from 1236 individuals in the marginal communities and worker classes in Bangladesh of whom only one

was female smoker and rest all male were smokers constituting 99.8% smokers in the respondents. This revealed that < 1 % females of our survey sample smoke tobacco. This might increase slightly with a bigger sample size. The study has also noted that approximately 50% of the smokers belong to the middle age group (i.e., 30-50 years), while smoking habit decreases in the age group above 50 years. The most concerning thing that came out from this study is the percentage of smoking at a young age (10-30 years), which is almost 35% of the sample size. As a part to this end, survey results indicated that level of education has a determining role in tobacco smoking in Bangladesh, as the higher educated (UG and above) respondents were found to consume less tobacco (12%), whereas those between standard six to twelve are amongst the highest (59%) consumers of tobacco in the surveyed sample from Bangladesh. Thus, almost 90 % of smokers belong to less-educated stuff. So far, the health awareness and sensitivity are concerned among the surveyed individuals, the sample study revealed that more than 90% of the smoking fraternity of the sample in Bangladesh has no prolonged illness or chronic obstructive pulmonary disease. Alike India, this may be due to poor financial conditions that smokers from the marginal communities can't afford health check-ups and lack health awareness as well, neither do they have equitable access to health services. This input will be important for designing a cohort specific cessation program for Bangladesh.

Table A2: Response of the population against health issues

| <i>Questions</i> | <i>YES (%)</i> | <i>NO (%)</i> |
|---|----------------|---------------|
| <i>Do you have any prolonged illness?</i> | 7.69 | 92.31 |
| <i>Do you have any Chronic obstructive pulmonary disease?</i> | 1.38 | 98.62 |
| <i>Did you suffer from COVID-19?</i> | 4.85 | 95.15 |
| <i>Did you quit smoking after COVID?</i> | 1.21 | 98.79 |
| <i>Do you have health insurance?</i> | 1.05 | 98.95 |

Alike the trends in Indian sample for survey it has also been found that 83% of the married population are addicted to smoking tobacco in Bangladesh. The commonness might be arising from the similar socioeconomic stature of the cohorts. Further, nearly 48% of the surveyed population in Bangladesh were in the formal sector and rest in the informal sector but there is no acquainting trend found between the groups in terms of smoking.

A(3): Nepal

The results of the present survey that approached over 1400 individuals in the rural and forest fringe villages of Nepal and acquired responses from 1211 individuals, however showed that 93% of the respondents are smokers and amongst them 90% are male and 10% female. The female smokers are higher in number compared to India and Bangladesh. Smokers belonging to the young age group (10-30 years) make 33% of the lot, which is only 3% lesser than the middle age group (31-50 years). Further, the smoking habit is amplified amongst those in the informal sector and self-earning, as well less educated, which resembles the trends in other two

countries. This also suggests that the minors and the uneducated youth in the study sample who enjoys better cash flow, are highly exposed to smoking. Its interesting to note that maximum number of smokers and maximum number on non-smokers, both appeared in the upper age group of 31-50 years, which is a unique trend herein and only suggests that smoking is a protracted addiction and persistent with the habit of having it.

Table A3: Response of the population against health issues

| <i>Questions</i> | <i>YES (%)</i> | <i>NO (%)</i> |
|---|----------------|---------------|
| <i>Do you have any prolonged illness?</i> | 14 | 86 |
| <i>Do you have any Chronic obstructive pulmonary disease?</i> | 9 | 91 |
| <i>Did you suffer from COVID-19?</i> | 2 | 98 |
| <i>Did you quit smoking after COVID?</i> | 4 | 96 |
| <i>Do you have health insurance?</i> | 18 | 82 |

In this survey sample too, more than 80 % didn't complain about any prolonged illness and 91% of smokers do not refer to any pulmonary disease. Reportedly, an estimated 27 100 deaths (14.9% of all deaths) are attributed to tobacco-related diseases in Nepal, which implies that the respondents are unaware of health concerns and are too poor to avail professional medical services and health check-up facilities. The rest of the trends are very similar to the two other countries.

A comparative demographic profile of smokers for all three countries is tabled here below for a stratified survey output in reference.

Table A (4)-i: Smoker's Socioeconomic Profile

| Country | Age (Years) | | Income (INR/BDT/NR) | | Sector | |
|-------------------|-------------|-------|---------------------|--------|--------|----------|
| | <30 | >30 | <10,000 | >10000 | Formal | Informal |
| India | 37.37 | 62.27 | 8.02 | 91.98 | 53.76 | 46.24 |
| Bangladesh | 34.44 | 65.56 | 13.42 | 86.58 | 51.17 | 48.83 |
| Nepal | 33.94 | 66.06 | 4.54 | 95.46 | 42.61 | 57.39 |

Table A (4)-ii: Smoker and Non-smoker Respondents: Country wise share

| Country | Smokers (%) | | Non-Smokers (%) | |
|-------------------|-------------|--------|-----------------|--------|
| | Male | Female | Male | Female |
| India | 91.57 | 2.86 | 4.91 | 0.65 |
| Bangladesh | 99.92 | 0.08 | 0.08 | 0 |
| Nepal | 90.74 | 9.26 | 6.59 | 1.25 |

Section B: Smoking history and behaviour

B(1): India: The survey and research herein have found 60% of smokers are regular smokers and 19% of smokers are chain smokers, whereas only 12% of smokers are occasional smokers. Hence, 79% of smokers have become addicted to tobacco from a mere habit of occasional smoking. In India bidi & cigarette are the two popular forms of tobacco generally smoked like all other south Asian countries. In this survey, it has been found that most of the populace, who

are socio-economically challenged, prefer smoking bidi then cigarettes, as it is cheaper. Interestingly in India people also smoke *hukka* and *chillam* (mostly used to smoke Cannabis/Marijuana with tobacco). This study also revealed that only 24.7% population uses smokeless tobacco (Gutkha, Khaini) and rest are majorly addicted to smoking tobacco. Faintly though, but a curricular trend can be overviewed from the survey that curious smokers and occasional smokers become habitual smokers and then gets addicted to smoking tobacco.

B(2): Bangladesh – Male Bangladeshi smokers of tobacco often puff on cigarettes, bidi, and tobacco leaves such zarda, sadapata, gul, and khaini. However, ladies often chew tobacco leaves instead of smoking tobacco. 72 % of the surveyed population were found to be regular smokers whereas, 21% are chain smokers and 7% are occasional smokers.

In survey indicated that approximately 76% smokers in the marginal communities in Bangladesh start smoking at an age of less than 18 and among them almost 86% turns out to be habitual smokers and get addicted to nicotine. Sample survey reveals that among the smokers who were surveyed, 89% has never stopped smoking tobacco, the rest 11% stopped a few times due to several reasons like health issues, family pressure, financial crisis, religious restrictions, etc but they resumed the habit sighting unavoidable circumstances like personal problems, depression, or stress, wherein it acted as a relieving agent.

In Bangladesh cigarettes and bidi are the two popular forms of tobacco generally consumed. In our survey, we found most of the population smokes cigarettes. One of the reasons may be due to the market's largest segment Cigarettes with a market volume of US\$5,257.00 m in 2023. *Chillam* (mostly used to smoke Cannabis/Marijuana with tobacco) and *hukka* are not that popular in Bangladesh. The sample survey suggested, most smokers have no other parallel addiction in Bangladesh and a very little portion of the sample (3%) reported to consume alcohol other than tobacco.

Excessive use of tobacco in the form of both smoking and smokeless tobacco is an example of a modern epidemic and also known as ‘the brown plague’. Astonishingly, in the context of Bangladesh, this study found 83% of the population smoked tobacco even after knowing it can cause severe health risks. Moreover, only 20% tried to quit smoking tobacco and the success rate is only 17%. more than 90 % of smokers have never experienced any awareness or training to quit tobacco.

B(3) Nepal

Individuals from Nepal are introduced to nicotine in their adolescence, by 16 years of age. However, addiction to smoking is largely underestimated at initial stages, whence it is consumed on occasional basis and soon changes to unavoidable habit. This is a common behavioural trend in Nepal. From this study it has been found that 65% smokers of Nepal are regular smoker whereas, 10% are chain smoker. Rest is occasional and belongs to lower age groups. In Nepal bidi & cigarette are the two popular forms of tobacco generally smoked like all other south Asian countries. In this survey, majority of the respondents prefer to smoke bidi (raw tobacco leaf) then cigarettes. Interestingly Nepali people also smoke *hukka* and *chillam* (mostly used to smoke Cannabis/Marijuana with tobacco). As per the results in this study 63%

population uses chewable tobacco (*Gutkha, Khaini*) in Nepal, even along with smoking referring high nicotine dependence.

Section C: Cessation of Smoking and Alternatives

C1: India

With these finding and inputs from the respondents, their views on cessation of smoking or adopting tobacco alternatives has been assessed using TOPSIS survey tool and study method based on Multi Attribute Utility Theory (MAUT) to understand the plausible scopes and constraints of cessation of smoking habit and /or choosing alternatives of tobacco. The majority of the smokers (72.5%) in the sample survey declined to take part in any smoking cessation programme or even accept alternatives to tobacco.

Accessibility to cessation services

Others who wanted to get counselled or accept therapy and medication to discard smoking, belonged to a higher age group and were from the formal sector. This group had no problem affording the cessation programme or with the cost of tobacco alternative, moreover, they had the least botheration about their comfort of mind and health after accepting the cessation programme, they also didn't refer to any issues regarding social credibility while accepting the rehabilitation program for the cessation of smoking. A comparative graphical analysis of the responses to the questionnaire in Section [C], graded on a 10-point scale is here below in "Plate C(a)-India".

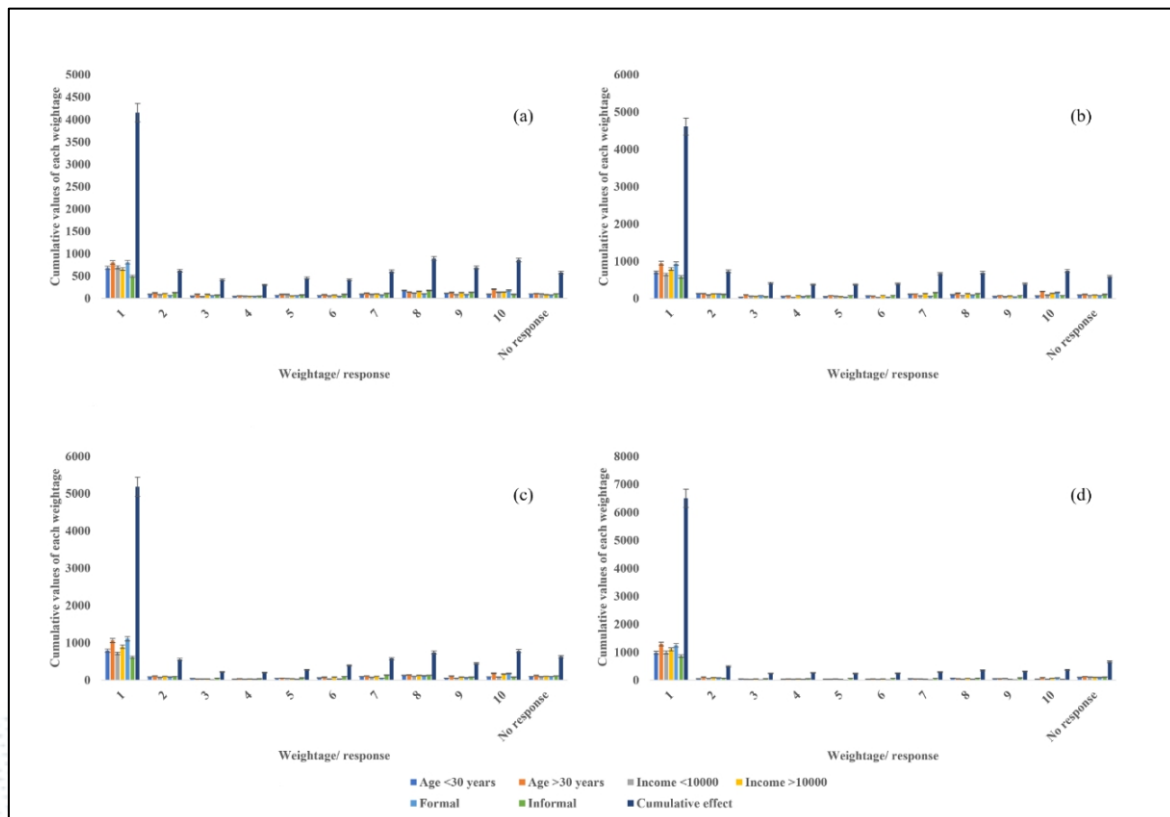


Plate C(a) – India: Cumulative value of each weightage (1-10) vs weightage/response of smokers based on TOPSIS study on the questions, (a) "I must get counselling and medication to discard smoking/accept alternatives", (b) "Cost of cessation or alternative to tobacco must

be affordable to me”, (c) “I must get the comfort of my mind and health after accepting the cessation program or alternative solution”, (d) “Joining the cessation program or adopting to the alternatives must not impact my social credibility”.

C2: Bangladesh

Similar survey and study were implemented in Bangladesh as well to understand the views of smokers on accepting cessation or alternatives to tobacco. Smokers has been segregated into different groups based on age, job type and income to get specific response. A comparative graphical analysis of the responses to questionnaire in Section [C], graded in a 10-point scale are here below in “Plate C(b)-Bangla”.

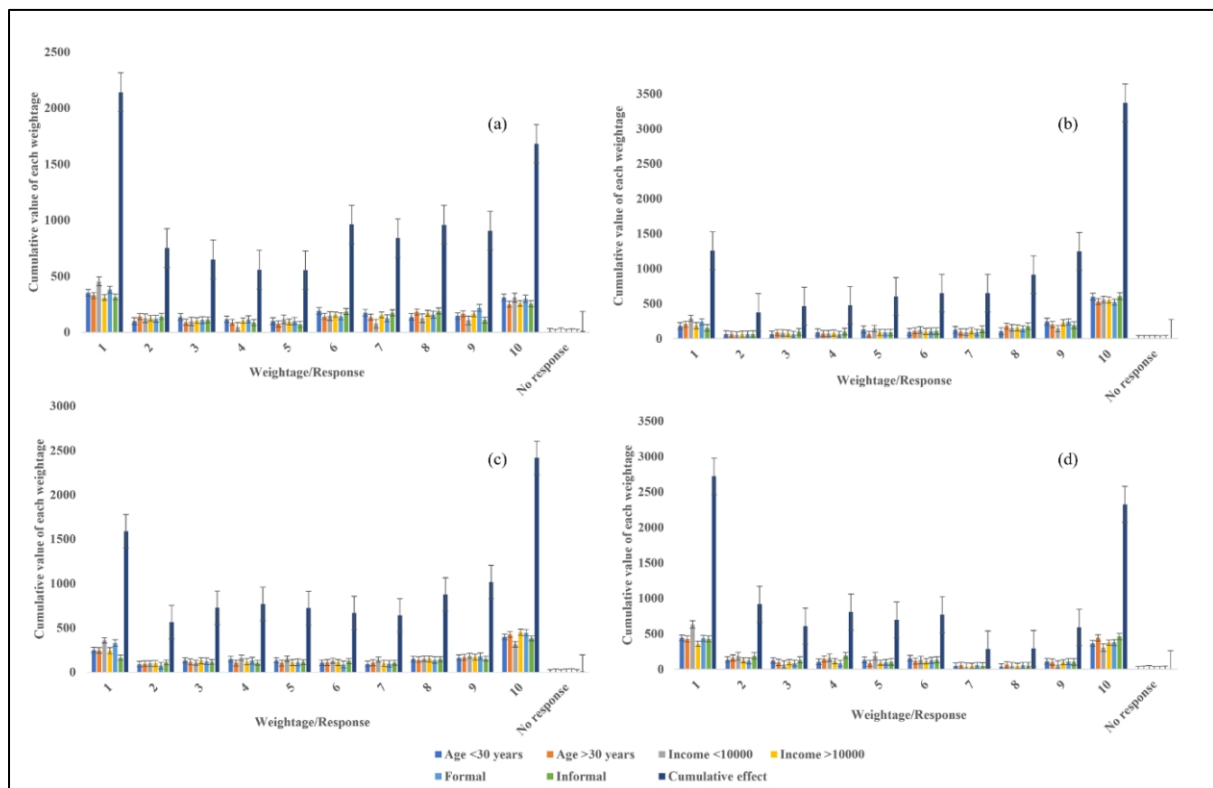


Plate-C(b)- Bangladesh: Cumulative value of each weightage (1-10) vs weightage/response of smokers based on the TOPSIS study questions,

This study found few of the respondents (38%) are least willing to accept counselling, medication, or alternatives to tobacco smoking Whereas, another group (66%) is ready to accept counselling, medication, or alternatives to tobacco smoking. The rest were indecisive. From the survey and analysis, it can be inferred that the cumulative response for the low-income groups (<10000 BDT/month) is the highest and influencing the cumulative weightage to be at a low stage. Only 13% of those who decided to stop smoking, according to this study, are from a low-income category. That also indicates the underprivileged category of society is not at all interested to undergo adaptive training for cessation of smoking habit. Probably, they fear of losing their daily livelihood, while getting engaged in such program. Moreover, smokers belonging to the younger age group (<30 years) too, are not ready to accept medication, counselling, or alternatives for smoking, which is a major concern and demands extensive

counselling. Those respondents who opted for cessation or alternative to tobacco belonged to the age group above 30 years, and they were ready to endure cost-effective solutions. Response of the younger age group and workers of the informal sector is highest and influencing the cumulative weightage, indicating cost-effectiveness is one of the major factors for cessation. The highest cumulative weightage is at a high scale, indicating smokers of Bangladesh cohort want easy access to cessation programs or alternatives to tobacco. Smokers, who belong to low-income groups and agreed to accept cessation, are least concerned about the comfort of mind and health after accepting the cessation program or tobacco alternative, whereas smokers belonging to the high-income group and working in the formal sector want the comfort of mind and health after accepting a cessation program or alternative to tobacco. Young (<30 years) and low-income groups do not care about social structure or societal credibility after adopting a cessation program but those who lie in the age group > 30 years and belong to the high-income group do have a problem regarding social credibility, if they at all have to forgo the same. Research findings on the predictors of smoking cessation behaviour have earlier examined the factors associated with quit attempts and smoking cessation among a representative sample of Bangladeshi adults. During the 11 to 12 months between Waves 1 and 2, 21.8% of baseline smokers attempted to quit smoking (i.e., made at least one attempt that lasted for at least 24 hours), but only 4.1% of them were successful (i.e., had quit smoking for at least 6 months). A quit attempt was less likely to be made by daily current smokers who smoked 10 to 19 manufactured cigarettes per day. In another study, it was shown that 47.38% of participants tried to stop smoking, and among them, 27.13% employed a different strategy. Counselling has been the most popular strategy for stopping. Age, education, and wealth index were found to be significantly associated with the use of methods to stop smoking tobacco in the logistic regression study of methods used to stop using tobacco, whereas gender, age, and wealth index were found to be statistically significant factors in the study of methods used to stop using smokeless tobacco.

C3: Nepal

Multi Attribute Utility theory based TOPSIS study to understand the views of Nepali respondents on cessation and choosing alternatives to tobacco, showed that majority of them are not ready to accept cessation programme or alternatives to tobacco. The analysis is represented graphically in **Plate-C (c) Nepal** below. The response of the smokers is moderate regarding to the comfort of mind and health, if they accept cessation programme or alternative to tobacco. Although they do not have any issue regarding the social status or societal credibility if they accept cessation or alternative to tobacco. This study also supports the government report, as it was found that 33% of youth (10-30 years) engaged in smoking are reluctant to quit, since they are not aware of any structured cessation program or alternative support system for quitting the habit. In Key-informant interview (KII) with the survey team, Mr. Durga Bahadur Thapa, Army chief Nepal, Chief district officer of Saptari Mr. Bhupendra Thapa, National Investigation department chief Mr. Tika Prashad Pokhrel and Mr. Navin Singh Rai, Chief Armed Police force, Saptari regarding accepted and acknowledged that active or past knowledge of cessation/awareness programmes is lacking. But unfortunately, they have no information regarding this as well. Mayor and deputy mayor of kharaka village were also

contacted for the same and they too were unable to provide any information regarding cessation programmes, while they recollected that only cessation programme in Nepal was run by WHO’s Practical Approach to Lung Health (PAL). Moreover, Despite enacting different policies and strategies, the prevalence of tobacco consumption is still high as has been studied locally by Khanal & Khatri, recently in 2021. Thus, there is huge scope for cessation strategy development in Nepal to eradicate smoking from this part of the world. The recommendations and way forward are discussed at the end part of this report.

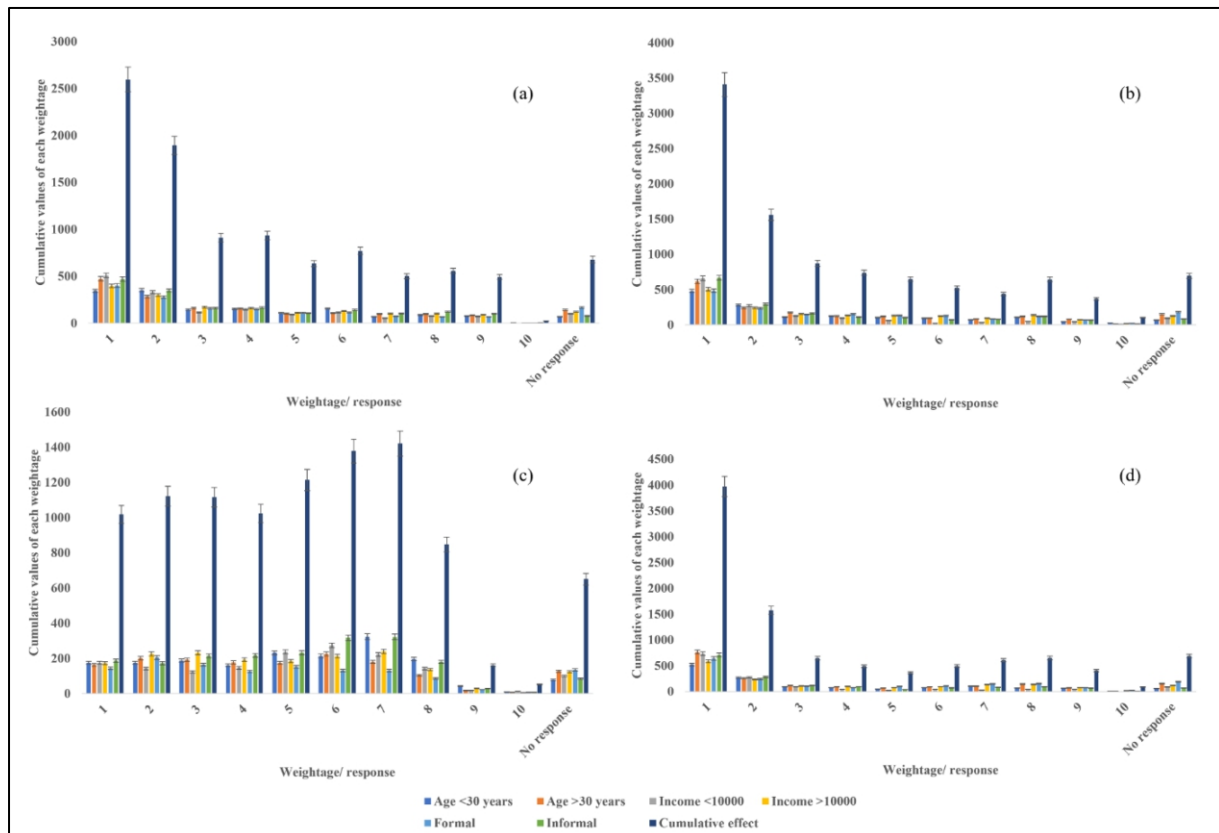


Plate C(c)- Nepal: Cumulative value of each weightage (1-10) vs weightage/response of smokers based on the TOPSIS study questions,

With regard to tobacco harm reduction and cessation of smoking habit, the respondents provided a mixed opinion especially for the attempts for trying to quit the habit, seeking alternatives or joining a cessation program thereto. The comparative analysis of the responses is below in **Figure C (i)**. Efforts for quitting, as has been attempted by the respondents interviewed in our survey, included self-trials, seeking available alternatives and accessing the support system of counselling and medication to discard smoking or accept alternatives. Perusal of survey results show that, while the Indian respondents of higher income group aged above 30 years vouched for such counselling and medication, the youth of age below 30 years and the respondents in the informal sector outrightly rejected it. The scenario is different in entirety in Bangladesh wherein the youth and the formal sector respondents were keener to adopt counselling and medication or alternatives to smoking, the respondents having aged above 30 years as well those in low-income groups rejected it. In Nepal, the respondents above

the age of 30 were willing to accept such counselling and alternatives alike India but the respondents in the informal sector too wanted the same. However, youth rejected such opportunities along with the respondents from the formal sector. This analysis implies that the acceptance and rejection of counselling or alternatives to smoking habits are not driven by either of the factors like age group, income group, or occupation, rather it is determined by societal and psychological aspects or circumstantial impacts on the individual. Therefore, it is imperative to understand these features of a cohort before designing any counselling or medication programme, as well recommending alternatives to smoking habits.



Figure C(i): Attempts for Tobacco Harm Reduction and Quitting smoking habits by the respondents.

Interestingly the elderly respondents of age above 30 years in India and Nepal were not concerned about the cost of any tobacco alternative or cessation program for THR and they didn't bother about the affordability of the same, whereas the same age group in Bangladesh was more concerned about it. The youth in India and Nepal, of age below 30 years, were both concerned about the cost whereas in Bangladesh the respondents of the same age group (< 30 yrs), who are self-employed in the informal sector, did not show much concern about cost or affordability. This would imply that if it was more affordable, more people irrespective of age and occupation would have



used it. A learning point is that the youth would be more proactive to adopt smoking alternatives in all the 3 countries if the cost of the alternatives is affordable to them.

Accessibility to cessation programme and alternative solutions received more aligned responses from different cohorts in these 3 countries. In all the countries respondents above the age of 30 and belonging to the higher income group were keen to attend cessation programme or adopt alternative solutions for discarding smoking habits. Even the informal sector in Nepal was also eager to join such programmes. This suggests that these groups can be considered open to be included in the cessation programmes whereas the respondents below the age of 30 years and belonging to the low-income group were highly reluctant to attend such programmes and would therefore need strong counselling and motivation. The response received about getting the comfort of mind and health while attending the cessation programme or accepting alternatives is highly varied and probably it is connected to an individual's own state of mind and health the responses show that in India aged people and those belonging in the formal sector care about the comfort of mind and health, whereas, in Bangladesh, the low-income group and the formal sector has the same concern. In Nepal, the informal group and the high-income group are willing to get comforted in mind and health through these programmes. Those who did not care about these aspects where the low-income group and the informal sector of India, the aged respondents of Bangladesh, and the informal sector therein, whereas, in Nepal, the respondents above 30 years and those in low-income groups were minimally concerned about the comfort of mind and health. With regard to the impact of joining a cessation programme or adopting the alternatives on the social stature or credibility of an individual the responses received from different cohorts were perused and it was observed that the respondents above the age of 30 and those belonging to the formal sectors in India and Nepal as well were sensitive to the impacts on their social stature and credibility, whereas, the youth and the low-income sector in these 2 countries were least concerned about the impact. Therefore, in designing any programme or prescribing an

CASE STUDY X

Illyas of Karimganj Bangladesh is 47 now and had been smoking for about 2 years. Although he has a long history of schizophrenic illness, Illyas has not needed hospital treatment ever, either for mental disturbances or health sickness. He attended few mental health camps in the local health centre and he is a respected volunteer with the mental health advocacy team. COVID lockdown period took him to deep depression and he had to be admitted to mental hospital in 2020 September. He started smoking after he was admitted to hospital to receive treatment for a schizophrenic illness. When asked why he started smoking he said it was to alleviate the boredom of being in hospital and to fit in and bond with the other patients. His mental health may also have been a contributing factor. A heavy smoker, Illyas now smokes at least 20 bidis a day which he bought from his wife's earnings. In 2022 April, Illyas was diagnosed with severe COPD and was awaiting a procedure but the surgeon had warned him that it might not help unless he stopped smoking. Illyas was very worried and was keen to stop smoking. He had no access to cessation services for help in his quit attempt. His family was supportive of his quit attempts but were worried about the effect on his mental health should he stop smoking. Although keen to stop smoking, Illyas had thought enough about the quit attempt to make him concerned about whether or not he could achieve it. He wished, had there been professional services to help him in this critical juncture of life.

alternative to smoking habits for India and Nepal the impact of the same on the social stature must be taken into consideration for the aged people and as well the formal sector. However, the youth can be included more easily in such programmes. The Bangladesh scenario is posing an absolute reverse picture to the above, wherein the informal sector and the low-income group are more concerned about the impact on their social stature and credibility whereas the high-income group and the formal sector were giving the least weightage to this. It suggests that the societal stature and credibility of the individuals from the informal sector or the low-income group in Bangladesh must be delicately dealt with in formulating a cessation programme for them.

Section D: Motivational Factors in Quitting Smoking Habit

Less than 3% of respondents in our study sample reported trying to stop smoking on average, and 17% of those attempts were unsuccessful. This study set out to examine the reasons that motivate and the methods used in successful attempts to stop smoking in lower-middle income nations including India, Bangladesh, and Nepal in the lack of any literature from the intervention countries. The reasons are mainly lack of motivational factors, awareness and counselling and most importantly access to structured cessation program for tobacco harm reduction. A brief country-wise comparison of smoking quitting and motivational factors is given here below in Figure D-(i).

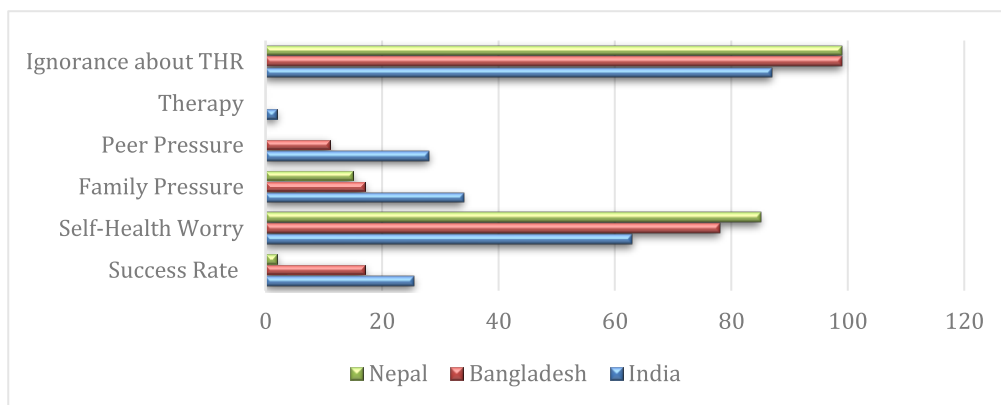


Figure D(i): Smoking Quitting & Motivational Factors (in % value)

D1: India

In India, out of 415 former smokers, who reportedly attempted to quit smoking, only 25.54% quit successfully on their first attempt. Only 1.9% used a cessation aid, most commonly nicotine replacement advice from a medical professional. However, 87% of the overall respondents had no awareness and idea about any cessation therapy or program or any method or process for tobacco harm reduction. Motivations for quitting included worry about own health (63.5%), promptings by one's family members (33%), and fear of habit formation in children (34.2%). Other social pressures included peer-pressure to quit smoking (27.5%) and social avoidance by non-smokers (12.7%). 57% of those, who were successful in smoking cessation on one's first attempt were married, whereas employing an cold turkey mode of quitting had helped only 9% of the respondents to quit smoking for a maximum period of 8 months only.

D2: Bangladesh

In Bangladesh, out of 170 former smokers, who attempted to quit smoking, only 17% could quit in the first attempt. There was no respondent who referred about any kind of cessation program or THR therapy usage. They were totally ignorant of any such program or activity that can help them quit the habit. The motivation for quitting has been mostly (78%) worries about diseases like tuberculosis and cancer, whereas family motivation for quitting has been very low (17%) and peer pressure too for motivating quitting has been as low as 11% only. Herein, marriage has been a factor for quitting only in the initial phases but in long run it has been found that married male is more addicted to smoking. No one of the respondents have been found to quit the habit abruptly.

D3: Nepal

The rural respondents of this intervention from Nepal also reportedly had no idea or access or knowledge about any cessation program or therapy in their locale, neither have they been sensitized by any health advisories or programs for quitting the habit of smoking for tobacco harm reduction. Only 54 respondents reluctantly admitted to have attempted quit smoking and 2% were successful in the same. The main reason for quitting was obviously health issues and self-health concerns, which accounted for 85% cases, whereas family pressure and insisting advices to quit were the factors for the attempt in rest of the cases. Peer pressure, marriage and societal factors have not been indicated as a motivational factor for quitting in the survey.

Section E: Psycho-biological and Social Drivers, FTND Test

E1: India

Nearly 18% of our respondents demonstrated a very early smoking debut in the age group of 15–24 years, which corresponds to earlier research as well by Ghose et al in 2019 and a significant proportion of India's current population fall into this group. However, this is predominant in urban and peri-urban fringe areas of our survey and impacts those as well who temporarily migrate to these areas for working in informal sectors. An intriguing urban market study reveals that tobacco companies aggressively target the youth with special products like flavor-infused and specially packaged cigarettes, loud displays in stores and supermarkets, on social media, and celebrity endorsements, which have been increasing the youth's susceptibility to tobacco use. The Global Youth Tobacco Survey indicates that 15.5% students are likely to take up tobacco in India annually, but there has been limited information on how today's youth perceive smoking and using other tobacco products, why they use tobacco as a habit-forming agent and most importantly, what they think of the anti-tobacco campaigns and legislative control measures that exist today in the country. This study enlightens up this grey area to a considerable extent as understanding of their perceptions is critical in identifying gaps in their awareness and in the effective implementation of tobacco control laws of the land. Smoking has largely been considered as a social behaviour by the younger respondents in this study and the factors that has been mostly identified by them in influencing smoking initiation or building it up as an addictive habit were (a) Peer influence and social desirability (b) Curiosity about experimenting with smoking (c) Identifying smoking as a method of stress relief. These factors

were reported as influencers by the youth who are smokers, as well as the ones who said that they do not smoke. However, the aged adults and older respondents have identified stress (both economic and societal) and psychosomatic habit as the stimulating factor for smoking, since they are already addicted to it. Put graph.

Perusal of result outputs from our designed strategic assessment tool, revealed that respondents who are adult smokers and working mostly in the formal sector as well belong to the high-income group (>10000 INR/ Month) feels the highest craving for nicotine, usually during the day-break, while respondents from the lower income group craves for a smoke during working hours, especially after lunch-break. This relates to the physiological demands for nicotine in the adults in their central nervous system after physical work or food intake as the blood flow rises in the peripheral body parts. However, the studies in the lower age group, especially the youth, is contrastingly different. 37% of the respondents in this group pointed out the role of peers

who encouraged first cigarette. Social more inclusive in a to look smart that group was factor in smoking these young adults first started smoking senior peers who cigarette to be

Community QUOTE I

MONGOL AULIYA, PANCHAYAT HEAD, BHANGAR, SAYS "MEN IN MY VILLAGE ARE POOR, THEY WORK WITH HUNGER. UNLESS THEY SMOKE HOW WOULD THEY GET THE ENERGY TO WORK IN SUN AND DUST? SMOKING IS HARMFUL BUT NOT MORE THAN HUNGER, I SUPPOSE."

in tobacco initiation them to smoke their desirability to feel group and smoking enough to belong to reported as a major initiation. Most of reported that they with their friends or had offered a smoked in 'counter'

which colloquially means sharing. At least 14% of the respondents from lower age group, who were students, reported that they tried their first cigarette to understand why their elders at home or in school smokes regularly. Among the other reasons those were revealed in this study included common curiosity about tobacco, trying a cigarette as an experimental thing, which later formed a habit, trying the cigarette as it was fun to try something new etc. Most of these students who had tried cigarettes feeling curious ended up forming a habit; except for only few (3.7%), who didn't like the taste or the experience and therefore never smoked again.

Respondents from upper age group, think smoking do not facilitate their social position anyway in their professional life, hinting at a change in perception of the habit of smoking. In the Indian context, 37-40% of the respondents from the upper age group think smoking acts as a physical stimulator, whereas another group of almost same proportion believes smoking does not have any impact on physical stimulation like feeling energetic, enthused, and happy. The majority of the informal sector workers however doesn't perceptually recognize smoking to be a physical stimulator though their craving for nicotine increases in the working hours, on the contrary they think smoking reduces boredom. Those who work in the formal sector and belong to the younger age group strongly believe smoking reduces boredom. Stress and subsequent relief from stress after smoking was identified as an influencer. Stress was reported to be of facing economic, societal, carrier related issues or family problems; in addition, associated symptoms of stress as headache, sleeplessness, feeling depressed, etc. were also reported to be relieved by smoking in youth respondents. Many of the young adults (above

75%) reported to be resorting to smoking as a relief from their stress, depression and tensions of personal lives. A mixed response (of ratio 45:55) has been noted from the sample respondents interviewed in India, as one group of smoker thinks smoking tobacco reduces mental despair while another group believes smoking has no connection with mental despair. Smokers from the younger age group and formal sector worker believes smoking do not reduce mental despair, whereas informal sector workers believe smoking reduces loneliness, hopelessness, anger and frustration. Our Indian respondents, though a small size in sample survey, unanimously believed that smoking has no effect on sensory motors like, taste, smell, touch, vision or hearing. As the study focused more on the younger respondents, with whom the cessation action program can be better planned, it was observed that the perception of the young adults on tobacco addiction and how they judged themselves in terms of being ‘tobacco users’ bears very diverse viewpoints. It included non-smokers view that ‘Tobacco is bad for health, I don’t like it and I don’t smoke’, whereas those who were smokers, they persistently believed ‘I am not an addict’, and few only (nearly 8%) acknowledged ‘I am an addict and I am trying to quit’ or ‘It is possible to quit’. A few (less than 2%) also expressed that ‘It is impossible to quit’.

From the Fagerström test for nicotine dependence (Fig E(i) below) it has been found that, only 11% smoker are highly dependent on nicotine, whereas 30% fall in the low dependence category, 33% in the low to moderate dependence category and 31% in the moderate category. High dependence on nicotine or tobacco consumption in the Indian context might be due to the vast spectrum of tobacco products available for smoking as well as smokeless usage. Cigarettes, bidis, and hookah are smoking forms of tobacco, while smokeless tobacco consists of chewable tobacco products locally known as *khaini*, *gutkha*, or *pan masala*. It is apprehended that economic stress might also be a major factor indulging population to acquire smoking habit and tobacco addiction, since reportedly around 80% of the world's 1.1 billion smokers live in low and middle-income countries.

E2: Bangladesh

The cohort that was surveyed in Bangladesh represents mostly marginal communities working in informal sectors and their work challenges include drudgery, economic inequity, and adverse working conditions. Thus, nearly 72% respondents took to smoking both as a leisurely relaxation and as well a stimulus for work. 85% of the respondents couldn’t identify the habit as an addiction or a peer pressure or even societal assurance of their entity, rather it presumably indicated smoking as a reflex action during work. Few indistinct but interesting aspects that surfaced during the survey from their candid conversation was that – smoking is easily relates to their societal status and recognized by their community mates, as well it helps to introduce one-self, initiate communication or bridge gaps in the workplace. This hints about the integration of the habit of smoking with their societal identity. Religious embargo and spiritual obligations as well are strong factor in controlling smoking or any other form of addiction and probably that is one reason women are least engaged herein. However, most of the respondents (92%) do not consider smoking as an abuse or addiction rather it is a normal male feature in the society.

Fagerström Test for Nicotine Dependence (FTND) in this survey samples indicated (Fig E(i) below) that when someone has a lower salary (<10000 BDT/month) or works in the unorganized sector, their response to nicotine addiction and cravings is at its maximum. On the other hand, those who work in the formal sector tend to respond the least. Majority of smokers who took the test said that smoking neither confers social standing nor helps one obtain a place in society, however, it builds relations and connections smoothly. Smokers in this sample mostly believe that smoking reduces their boredom but does not reduce mental depression and has no impact on their physiological reflexes and sensory motors. Fagerström test for nicotine dependence showed 29.58 % population is in the low dependence zone, 34.6 are in low to moderate dependence zone, 29.91 are in the moderate dependence zone and 5.89 are in high dependence zone. This is correspondingly different from the Indian context.

E3: Nepal

The cohort surveyed in Nepal, represents rural, marginal, agrarian communities residing in forest fringe villages mostly. They too are so intimately accustomed to smoking that they do not consider it exclusively as an addiction and it is normalized as a casual daily habit only. This makes it difficult to identify the inherent psycho-biological or societal drivers par se. However, Fagerström Test for Nicotine Dependence (FTND) study obtained a profile of the respondents that suggests, economically challenged groups of individuals and youngsters feel moderate nicotine craving and majority of them work in the informal sector as casual labourers. The Nepali respondents of this survey opined that smoking does not have any impact on their social position or it has no connection with social status. From FTND study (Fig E (i) below), it was observed that 19% of these respondents has low dependence for nicotine, whereas, 35% and 32% smokers fall in low to moderate and moderate nicotine dependence zone respectively. Only 7% smokers crossed the redline of high dependence of nicotine. It is imperative that understanding the aspect of smoking and recognizing its impact on the physical and mental health is unusually meagre in the respondents and it calls for a momentous awareness building.

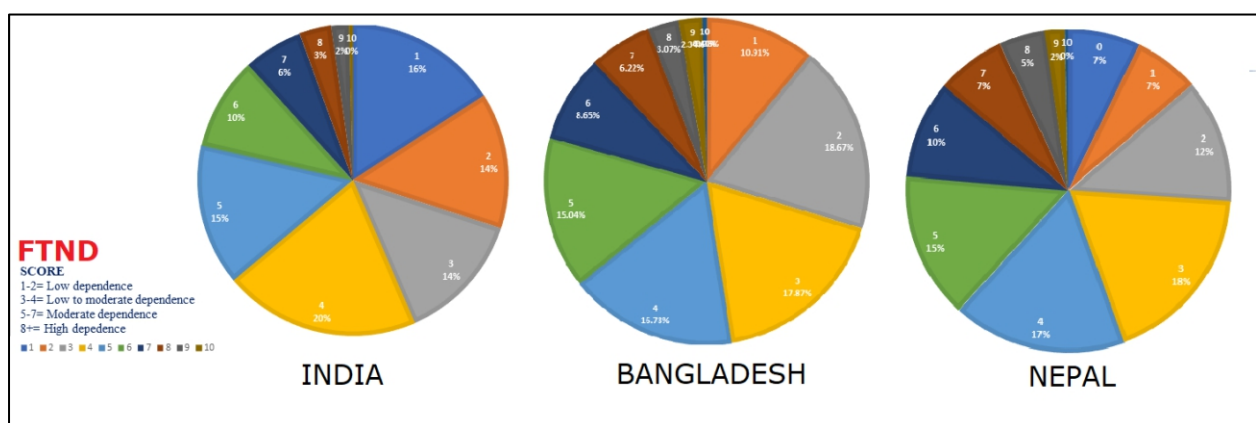


Figure E(i): FTND test scores of India, Bangladesh and Nepal survey samples

Section F: Vulnerability Analysis

F1: India

The present work draws on research that examines vulnerability as a social condition or as a measure of the resilience of population groups when confronted by disaster. It's important to

note that the impacts of disaster or vulnerable factors do not equally impact the individuals in a cohort. The ability of an individual or group to prepare for, deal with, repair, and recover from the repercussions of a disaster is referred to as social vulnerability. Some examples of stress factors that might enhance a person’s vulnerability, include socioeconomic stress, environmental and health disasters, accidents, and occupational hazards etc. A probable range of such stress factors as has been observed during the survey, were selected and indexed for the smokers based on degree of exposure and impact as well on a 1-5 scale.

Table F1a: Heat map of health hazards and economic stress in India

| Stress factors \ Score | 1 | 2 | 3 | 4 | 5 |
|------------------------|----|----|----|----|---|
| Environmental disaster | 92 | 3 | 3 | 1 | 1 |
| Health hazard | 84 | 8 | 2 | 3 | 3 |
| Occupational hazard | 85 | 9 | 3 | 2 | 1 |
| Others | 98 | 2 | 0 | 0 | 0 |
| Societal stress | 86 | 6 | 4 | 3 | |
| Economic stress | 62 | 14 | 10 | 10 | |
| Emotional stress | 73 | 9 | 7 | 7 | |

The scores, tabled above as heat-map infographics, reflect that health hazards and economic stress have been the most vulnerable areas of exposure in post-COVID-19 scenario followed by societal stress and occupational hazard. This finding is in concurrence with WHO report, mentioned above.

However, from the vulnerability study it is very clear that majority of the smokers in the sample study in India, has got less exposure towards various hazards and stresses and were least impacted as well. Despite that the desperation for tobacco smoking hints at other circumstantial factors that are equipotently promoting the addiction and that need to be investigated thoroughly.



Along with those, it is imperative to note that absence of proper cessation strategy and lack of persistent awareness programmes aggravate the tobacco abuse largely. In this regard, the acquired adaptive capacities of the respondents were also assessed to understand whether extended capacity building, fiscal and economic support or technology cooperation can substantially reduce their vulnerability. These provisions were then assessed against a 5-point scale and a heat map was generated on the scores of the respondents. It is assumed that adaptive capacities will reduce the vulnerability, thereby enhancing their compatibility to the cessation program for abatement of or withdrawal of smoking habit towards a smoke free world. Perusal of results, as presented in the following table (Table no. F1b), shows that adaptive capacity development is at a low scale among the respondents. Lack of training exposure, technology adaptation, economic assistance and most importantly, that the awareness campaigns, counselling and preparedness is meagre has been evident from this study.

Table F1b: Heat map of adaptive capacity development in India

| Score | 1 | 2 | 3 | 4 | 5 |
|---|----|----|---|---|---|
| Financial Inclusion | 87 | 2 | 3 | 5 | 2 |
| Training and exposure | 94 | 4 | 1 | 0 | 0 |
| Technology adoption | 93 | 5 | 1 | 0 | 0 |
| Economic assistance | 82 | 10 | 5 | 2 | 1 |
| Awareness, counselling, preparedness | 98 | 1 | 0 | 0 | 1 |

F2: Bangladesh

In Bangladesh, socioeconomic vulnerability in these marginal cohorts is amplified by environmental disaster and occupational hazards as well. The vulnerability features are mostly like that of India.

Table F2a: Heat map of health hazards and economic stress in Bangladesh

| Stress factors \ Score | 1 | 2 | 3 | 4 | 5 |
|-------------------------------|----|----|----|----|---|
| Environmental Disaster | 60 | 19 | 11 | 7 | 2 |
| Health Hazard | 49 | 27 | 17 | 5 | 2 |
| Occupational Hazard | 55 | 24 | 14 | 5 | 3 |
| Other Hazards | 48 | 9 | 3 | 2 | 1 |
| Social stress | 55 | 22 | 15 | 6 | 2 |
| Economic Stress | 31 | 25 | 27 | 12 | 5 |
| Emotional stress | 59 | 16 | 13 | 9 | 4 |

So, from the table above it is very clear that majority of the smokers in Bangladesh are moderately exposed to various hazards and stress and all stress factors cumulatively enhance the vulnerability indices. Adaptive capacities too are very poor and demands substantial inputs towards built capacities, financial inclusivity and technology cooperation.

F3: Nepal

Status of vulnerability in the surveyed cohort in Nepal, were not different in anyway from the scenario as evidenced in India and Nepal. The scores are presented below within a heat map.

Table F3a: Heat map of health hazards and economic stress in Nepal

| Stress factors \ Score | 1 | 2 | 3 | 4 | 5 |
|-------------------------------|----|----|----|---|---|
| Environmental disaster | 68 | 23 | 5 | 3 | 1 |
| Health hazard | 54 | 33 | 9 | 4 | 1 |
| Occupational hazard | 64 | 23 | 8 | 3 | 2 |
| Others | 77 | 15 | 6 | 2 | 0 |
| Societal stress | 62 | 29 | 7 | 1 | 0 |
| Economic stress | 48 | 36 | 11 | 4 | 2 |
| Emotional stress | 70 | 21 | 7 | 2 | 0 |

Adaptive capacity building in the respondents of Nepal is in an incipient stage and calls for serious attention through outreach activities.

Table F3b: Heat map of adaptive capacity development in Nepal

| Score | 1 | 2 | 3 | 4 | 5 |
|---|----|----|---|---|---|
| Finance | 68 | 24 | 6 | 1 | 0 |
| Training and exposure | 82 | 14 | 4 | 0 | 0 |
| Technology adoption | 81 | 15 | 4 | 0 | 0 |
| Economic assistance | 77 | 17 | 5 | 1 | 0 |
| Awareness, counselling, preparedness | 81 | 15 | 3 | 1 | 0 |

In Nepal, illnesses associated to tobacco use are thought to account for 15% of all annual deaths. Though this vulnerability study has found that exposure of various hazards and stress on the surveyed populace is at a comparatively low scale, indicating that smoking in Nepal is not directly driven by hazard or stress, and might be it is strong addiction and persistent habit formation that accentuated circumstantially through a prolonged period of usage. Most significantly, 81% of those interviewed claimed that neither governmental nor private groups have organized any awareness or counselling programmes. The also expressed their bare ignorance about tobacco alternatives available this remotely. This emphasized about mass risk communication and awareness needed to introduce cessation programmes in Nepal.

Section G: Reason for smoking

G1: India

Assessing the ‘reasons for smoking’ from the responses of the subjects of the survey is actually a perception-based study that enumerates the socio-psychological conditionings and helps to identify the drivers thereto. This study used ELECTRE (ELimination Et Choix Traduisant la REalité - ELimination and Choice Expressing the REality) family methods to assess the reason for smoking through a scaling method, as detailed in the methodology section. Reviewing



the results from the Indian study sample, it is perceived that majority of formal sector employees with higher age group (>30 years) think tobacco smoking acts just as a stress reliever, though they are not ready to quit smoking as they are addicted to it. Others, whose income is more than INR 10,000 per month, assume that they are not addicted to smoking and can quit, if needed. Factually, the little affluent people have some educational background and consider smoking as a societal problem, thus showing concurrence with cessation proposals. However, the majority of the smokers herein believe that smoking is not a style statement in their own societal ambience, those who think so, belong to the younger age group (<30 years) and are exposed to urbanite culture. Another important observation from the subjects surveyed in urban offices and organizations is that they do not think smoking is related to their physiological well-being or relief. This is juxtaposed with the views of those who work in the

CASE STUDY XII

Vinti Devi, 37 yrs, from Sirha Nepal, has been a regular smoker since she was 13. She had seen her mother smoking while collecting Saal leaves in the forest and she started copying her using the folded Saal leaves for smoking.

Now she smokes almost continuously for five to six hours, while in the forest all alone. She says, it gives her strength and presence of mind in the forest to feel safe. Smoking has not been harmful to her, but she doesn't like it any more. She can quit, if she doesn't have to go to forest all alone anymore.

formal sector and belong to higher age group. Nearly, 89% of the smokers who were surveyed in India, have confidence that smoking is not twined with their personality, however, the young women and the individuals in the upper middle class have otherwise affirmed that smoking qualifies their personality in societal platforms.

G2: Bangladesh

A similar study in the surveyed sample in Bangladesh showed that most smokers therein consider that smoking does not reduce stress or increase thoughtfulness. From the survey studies, it is very clear that the majority responded to a lower score in the scale. It suggests that they are reluctant to quit the habit of smoking and are addicted to it strongly. Review of responses provides some contrasting outcomes, that though the majority of smokers (78.5%) agree that smoking does not reduce stress, neither it is a fashion statement, nor it has any connection to physical well-being, and apparently it has no bearing on personality, still they consider smoking as a compulsive habit and they find it difficult to abate. Recent reports also reveal that tobacco use has increased by almost 15% after the COVID-19 pandemic, and its usage is more in the rural and underprivileged section. As our survey is confined mostly to underprivileged and poor sections of society it is apprehended that post-pandemic scenario might be influencing our result. Moreover, being one of the largest producers of tobacco and lacking robust legal framework to prevent tobacco addiction might have cleared its passage to the poor in crude forms.

G3: Nepal

It is observed that amongst the surveyed cohort in Nepal, those who believe tobacco can act as a stress reliever and enhance thoughtfulness of mind mostly belong to economically poor section and counts for 43% of the total sample size. Although, economically better group of individuals does not believe smoking can reduce stress. Nepali respondents are neither adamant nor liberal in connection to quitting smoking habit, 77% of the surveyed sample have expressed a moderate response and majority of them (65%) belong to economically challenged class. Nepali

respondents too believe that smoking is not their style statement. Of course, smokers belonging to the younger age group and working in the informal sector believed that smoking is related to physiological well-being, which is contrasting to other previous observations. However, alike Bangladesh, the majority of the Nepali respondents (74%) think smoking is not twined with their personality.

Section H: Learnings and Way Forward

One of the learning from the survey outcome has been that there is a clear understanding across the people surveyed in these countries that tobacco consumption is harmful. Most of them have either seen government adverts and health warnings on tobacco products and have come to this conclusion. Some people have tried to quit by themselves and some have been guided by family or societal pressure.

What is also evident that when people want to quit, they are unaware of the ways to quit and of any services and products that help in quitting. With this, the survey has identified a gap between a countries tobacco control policy and ground-level reality. All policies restrict and regulate the consumption of tobacco however they do not support quitting the product. The marginalised communities that were surveyed here have both the highest vulnerabilities and the lowest access to any services whereby they could quit their tobacco habit. What is thus required is the inclusion of cessation programmes and services into the public health policy framework.

In our study, respondents in India had very limited understanding of Tobacco Harm reduction productions. There is also limited access to such products because of the blanket ban on these products and as such only the urban affluent and young have heard of these products as they are available illicitly. This is the same with Nepal though not in Bangladesh where these products are legally available however very little awareness about this among the marginalised common, Public health policy makers need to evaluate the THR restrictions in their countries based on case studies of countries were allowing THR products have significantly reduced the consumption rate like in Sweden. In countries where there is no such restriction like in Bangladesh, more efforts should be made to make the general public aware of these products as a tool to aid cessation.

Overall, Mass awareness, and sensitization for THR and tobacco smoking habit cessation amongst marginal communities should be proactively taken much beyond poster campaigns and IEC materials. Preferably, messaging should be interjoined with livelihood and lifestyle activities for example linkage with the public distribution system (PDS) or the block health services systems, immunization drives and other government extension services, etc. In all three countries, the younger generation and even minors (below 18 years) are found to be the victims of first-stage smoking habit formation, which is an alarming indicator as this would the public health interventions that currently exist which inform people of the negative aspect of tobacco habit has not percolated down to this new generation of would-be smokers. Therefore, a well-articulated youth-motivating programme aligned with the basic or primary education system with a stringent follow-up practice for monitoring progress is recommended.

Among marginalised people women make up a doubly disadvantaged group. They have lesser access to cessation services in terms of geographical mobility and purchasing power. Thus, any cessation program would need to be easily accessible to women, this could be done through healthcare workers who visit home or through local grassroots clinics which are available at a walking distance from home. Cessation advices through mobile health interventions like text messages received on their phone would also be beneficial in regular monitoring.

A layer of psychological counselling must be considered as an integral part of the cessation programme as our study reveals that the socio-psychological status of every individual happens to be a strong determinant for developing smoking habits, which calls for continued psychological counselling and motivation. It is imperative that the objective for cessation of smoking would be wider and not limited to tobacco alternatives. Therefore, medico-ethical treatment and diagnostic paraphernalia needs to be suitably strengthened through technical research and studies for developing systemic cessation programs.

The Way Forward

This study has successfully made inroads into vulnerable and marginalised communities in India, Nepal and Bangladesh. After this needs assessment survey, it was evident that cessation advice has not percolated down to the community level adequately. As a way forward we would like to propose a community-based social campaign in the selected cohorts of marginal groups developed under supervision of medical professionals to bring in more awareness of tobacco cessation. Communication tools will be developed in local languages and awareness programmes through alternative communication methods (skits, street shows, local TV and radio shows and other innovative methods). Since smoking for many of our respondents was a communal habit, where they would smoke when in company of other smokers, cessation should also be encouraged as a communal habit. Local youth groups and community elders would be encouraged to lead cessation awareness and implementation as a support group for each other. Some action-oriented community activities, as suggested below, would better enable the cessation campaign in these selected cohorts, to leave no one behind.

1. At organizational levels in the locale (government and private offices, institutions and local clubs, public meeting places or premises of factories and workshops, working places etc) interactive capacity building workshops, can be held to sensitize about the cessation programs and THR products.
2. Even the marginalised people surveyed here had access to mobile devices, thus health interventions for cessation can be planned catering the messaging for the cohort. IT based information outlet for cessation of smoking and THR programs can be instituted where all policy relevant information, cessation therapies and opportunities available etc will be disseminated. A dedicated website will be linked to social media handles, interactive infograms etc. to lead the cessation campaign.
3. Additionally, a community-based mapping of accessibility to available cessation services needs to be undertaken. This data would then be collated and shared with the communities so they can have access to these services. All government programs and schemes available to people for cessation under the national tobacco control program should also be collated and communicated to the people.

4. Once these interventions have taken place regular feedbacks need to be taken from the communities to assess considerable changes in their knowledge and awareness on tobacco use pattern and cessation of smoking behaviour, if any, has occurred. If so, whether it has positive implications thereto.
5. Lastly, the results of the targeted intervention program should be published for reference of public health providers, policy makers so as to serve as a model approach for community-based cessation programs.

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Are you ready for some quit smoking motivation?

Thank you

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