

**Prevalence and Determinants of Tobacco use among Adolescents in India, and
Programs Implemented for Tobacco Control and Prevention Nationally and
Globally**

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by

Reena Anthonyraj

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Professor Barun Kanjilal**

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Abstract

Tobacco is the cause of an array of preventable diseases killing 5.4 million people a year. India is the second largest producer and consumer of tobacco. The Global Youth Tobacco Survey (2006) indicated that 48.6% of the total ever smokers in India had initiated smoking before the age of 10. Tobacco consumption generally begins during adolescence between 10-19 years. Adolescents have been repeatedly targeted by the tobacco industry for marketing their products, as adolescents are easily attracted to substances that create a high pseudo social appeal of maturity and independence, and such a desirability is amplified by their risk taking nature, curiosity, and urge to experiment at a young age. About 21% of Indian population are adolescents, forming a major demographic and economic strength to the country. To ensure that tobacco products become less desirable and acceptable by adolescents, it is essential to create a social and legal environment that influences adolescents to adopt a positive behavioural change towards tobacco in a sociocultural setting that discourages tobacco as a socially desirable norm. Hence, the following literature review intends to understand the prevalence and determinants that drive adolescents to consume tobacco, and consider programs across India and worldwide that have demonstrated success in reducing the prevalence of tobacco among adolescents at policy, community and individual level. The review also intends to provide a platform of evidence based information for public health practitioners to use as a direction for formulation and implementation of policies and programmes for curbing the practice of tobacco usage among adolescents and in accepting “adolescents” as a dynamic population group with a psychographic profile different from that of adults.

Introduction: -

Tobacco is the cause of an array of preventable diseases leading to high rates of morbidity and mortality resulting in 5.4 million global deaths annually.¹ Consumption of tobacco has been growing by 2% to 5% yearly, with a projected increase in annual deaths from 3 million to 70 million globally (WHO-2009).² Worldwide, tobacco is responsible for “4.1 million deaths from cancer, 5.5 million deaths from cardiovascular diseases, 2.1 million deaths from respiratory diseases and 94,000 infant deaths from mothers who smoked during pregnancy”.² If the current trend in tobacco consumption continues, WHO estimates that tobacco will be a cause of 10 million annual deaths by 2020-2030 wherein 70% of these deaths will transpire in developing countries, particularly India and China.^{3,4} “India is the second largest producer and consumer of tobacco” after China⁵. In India, tobacco consumption is expected to grow by 2-3% per annum, with 40% of the total consumers chewing tobacco, 40% resorting to bidis and 20% smoking cigarettes.³ The Global Youth Tobacco Survey (2006) indicated that 48.6% of the total ever smokers in India had commenced use of cigarettes before the age of 10.⁶ Tobacco consumption generally begins during adolescence between 10-19 years.^{7,8} Adolescents have been repeatedly targeted by the tobacco industry for marketing their products, as adolescents are easily attracted to substances that create a high pseudo social appeal of maturity and independence, and such a desirability is amplified by their risk taking nature, curiosity, and urge to experiment at a young age.^{1,4} One in ten adolescents of 13-15 years of age have ever smoked cigarettes in their lifetime.⁶ Around 5500 new adolescents initiate tobacco daily, joining the previously large population of 4 million adolescents below 15 years of age who are regular tobacco consumers.⁷

21% of Indian population are adolescents, forming a major demographic and economic strength to the country that emphasizes the need to understand the prevalence and determinants that drive this susceptible population towards increasing consumption of tobacco, and to prevent premature morbidity and mortality.⁸ The following literature review is structured to perceive the prevalence, various elements and forces that motivate adolescents to commence and continue consuming tobacco. Additionally, programs across India and in other countries are reviewed to gauge for best practices that have demonstrated success in reducing the prevalence of tobacco among adolescents.

Aim:

To identify the prevalence and causal determinants for tobacco consumption among adolescents aged 10-19 years in India, and to examine programs nationally and globally that have demonstrated reduction in prevalence of tobacco among adolescents.

Objectives:

- To review the prevalence of tobacco among adolescents aged 10-19 years across India.
- To review the causal determinants in tobacco consumption among adolescents in India.
- To review success programs implemented in India and globally in reducing tobacco usage rates among adolescents aged 10-19 years, and to recommend practices to reduce prevalence of tobacco among Indian adolescents.

Background:

Tobacco existed in the world since 600 A.D.⁹ Europeans became familiarized with tobacco by Columbus, tobacco was familiarized in India 400 years ago by the

Portuguese during the Mughal era, and quickly became an essential part of the sociocultural environment prevailing in East, North-East and South India.^{5,9} Nicotine has been a primary constituent extracted from tobacco leaves since 1828 A.D.⁹ Smoked forms of tobacco as cigars and pipes, and smokeless tobacco were formerly consumed in India, with paper cigars and cigarettes gaining popularity in the mid nineteenth century.⁹ Awareness of damaging and detrimental effects of tobacco have been documented 1000 years ago in the works of contemporary rulers and religious leaders like King James I of England who spoke about smoking being “a custom loathsome to the eye, hateful to the nose, harmful to the brain and dangerous to the lungs”, King Jahangir who had passed laws to ban smoking in his kingdom, as well as the great Indian Sikh Guru Gobind Singh who not only declared smoking not permissible to his Sikh community but also remarked that, “ Wine is bad, Indian hemp (bhang) destroys one generation, but tobacco destroys all generations”.⁹ Over the preceding 4 decades, injurious effects of tobacco have been acknowledged in modern medicine, with trends displaying a decrease in tobacco consumption in developed countries as a result of intensified regulations and restrictions on the market, and increasing usage in developing countries, particularly Asian countries wherein tobacco industries that constitute a combination of transnational companies, state owned tobacco monopolies and private Asian tobacco companies, have adopted various marketing strategies to aggressively target new markets constituting adolescents and women to continue supplying tobacco in its numerous forms to induce demand.^{9,10,11.}

To address the tobacco pandemic, the “World Health Organization (WHO)” commenced and organized the “Framework Convention on Tobacco Control (FCTC)” that observed multiple complex factors instrumental in encouraging global spread of tobacco such as- “cross border effects (including trade liberalization and direct foreign investment),

global marketing, transnational tobacco advertising, promotion and sponsorship and the international movement of contraband and counterfeit cigarettes”.¹² The 56th World Health Assembly, in May 2003 approved the “world’s first public health treaty on tobacco control” the World Health Organization Framework Convention on Tobacco Control (WHO FCTC), which became an international law on February 27, 2005, that provides a blueprint and dynamic force for global tobacco control and prevention.⁶ The Convention is primarily responsible in placing cost effective strategies for public policies via an outline known as the “MPOWER package” based on six proven policies¹³ -

- “**Monitor** tobacco use and prevention policies”,
- “**Protect** people from tobacco smoke”,
- “**Offer** help to quit tobacco use”,
- “**Warn** about dangers of tobacco”,
- “**Enforce** bans on tobacco advertising, promotion and sponsorship”, and
- “**Raise** taxes on tobacco”.

In addition, the Convention also suggests countries to tackle “cross border issues such as cross border advertising, illegal trade and duty free sales”.⁶

“India ratified the WHO FCTC on February 5, 2004” and the Government of India with the help of World Health Assembly, worked on a comprehensive legislation targeted towards “ban on direct as well as indirect advertisements of tobacco products, ban on smoking in public places, ban on sale of tobacco products within 100 metres of educational institutions, legible and prominent warnings on tobacco products, and maximum limits on levels of tar and nicotine”.^{6,12} “The Government enacted the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation

of Trade and Commerce, Production, Supply and Distribution) Act (COTPA) in 2003” to legalize the above suggestions, with revised smoke free laws banning smoking in workplaces that “came into effect on 2nd October 2008”.⁵ To implement and strengthen the various provisions under COTPA, “the Government of India piloted the National Tobacco Control Programme (NTCP) in 2007-2008, with national, state and district level components”, whose implementation mainly lies with the State governments (see **Appendix 1**).⁵ “The NTCP is currently under implementation in 21 out of 35 states/union territories in India and covers 42 districts”⁵. As a result, “Chandigarh became the first city to be declared smoke free in 2007, and Sikkim the first smoke free state in 2010”.⁵

India is a growing market for various forms of smoke and smokeless tobacco products. Smoke forms include cigarettes, bidis, hooka, hookli, chhutta, dhumti or chillum; smokeless forms include tobacco and tobacco containing products that are chewed, sucked, smeared on gums or inhaled like gutkha, paan with tobacco, paan masala, mawa, mishri, snuff, khaini, dried tobacco leaves, gudakhu, toothpastes containing tobacco, plug tobacco, twist tobacco and dry snuff.^{2,9} Rising rates in growth and intake of gutkha¹ has surpassed smoking forms of tobacco, and low taxes on paan masala unlike cigarettes, has resulted in a massive escalation of usage of all types of areca nut and smokeless tobacco forms, particularly among Indian adolescents.^{2,9} As bidis² are exempted from taxes, a rise in their consumption is also observed.⁵

¹ “Gutkha is a manufactured smokeless tobacco product, a mixture of areca nut, tobacco and some condiments, marketed in different flavours in coloured pouches”.⁹

² “Bidi is a cheap smoking stick, handmade by rolling a dried rectangular piece of temburni leaf (*diospyros melanaxylon*) with 0.15-0.25 grams of sundried flaked tobacco filled into a conical shape and the roll is secured with a thread”.⁹

Rationale:

Amongst children and adolescents living presently globally, 250 million will die prematurely from tobacco related diseases, particularly in developing countries.⁷ In India, most consumers initiate tobacco use below 18 years of age, while some begin as young as 10 years.⁷ Tobacco products when consumed as smoke or smokeless forms contains nicotine a highly addictive and dependence producing substance that is easily absorbed in the bloodstream when chewed, inhaled or smoked, and evidence suggests that “adolescents are more likely than adults to develop addiction to tobacco”, making them an extremely susceptible and vulnerable target for tobacco companies to continue marketing their products.^{1,7} In reality, there are few studies covering the initiation, prevalence and determinants of tobacco consumption among adolescents in India, and hence support attempts to address the diverse trends arising in tobacco consumption. The rising prevalence among girls, downward drift in age of initiation, growing availability of cheaper forms of tobacco, increasing violation of laws by tobacco companies and stores, and strong lobbying by tobacco industries against anti-tobacco legislation and regulation in India make it imperative to comprehend the dynamics circulating tobacco as a pandemic.^{12,15} Early age of initiation and a biological and psychological predisposition for risk taking behaviour in adolescents makes it essential for targeting interventions on a national and global scale to protect the present and future youth from becoming victims to such a deadly poison.^{1,14} The following review aims to study the above trends and identify interventions that have succeeded in inculcating social behavioural changes among adolescents against tobacco, through observing tobacco consumption from a macro, meso and micro level. Additionally, the following literature review intends to provide a platform of evidence based information for public health practitioners to use as a direction for formulation and implementation of policies and programmes for curbing the practice of tobacco usage among

adolescents and in accepting “adolescents” as a dynamic population group with a psychographic profile different from that of adults.

Methodology:

To study the prevalence of tobacco, statistics from “Global Youth Tobacco Survey” and “National Family Health Survey” were analysed. To identify determinants for tobacco consumption among adolescents in India, Google search engine and PubMed were used to review studies conducted across different cities and states, both rural and urban areas on tobacco prevalence and causes, among Indian adolescents. PubMed was primarily used to recognize and study programmes implemented nationally and in other countries for reducing prevalence of tobacco among adolescents. Several Medical Subject Headings (MeSH) terms such as “tobacco”, “adolescents”, “smoking cessation”, “smokeless tobacco”, “tobacco control”, “tobacco legislation”, “mass media campaign”, “low and middle income countries”, “developing countries”, “tobacco control policy” and “health programme/policy evaluation” were used as keywords to search the database. Journals commonly referred through PubMed and Google Scholar were, Indian Journal of Public Health, Indian Journal of Community Medicine, BMJ Tobacco Control, The Indian Journal of Medical Research, Indian Journal of Cancer and Indian Journal of Paediatrics, amongst others. Determinants and, policy and programme interventions were searched and reviewed according to a multi-level intervention framework termed the IMPACT Model (Intervention Model for Protecting Adolescents and Children against Tobacco) (see **Appendix 2**).¹⁶ The determinants for tobacco consumption were further categorized as Intrapersonal, Sociocultural, Environmental, Economic and Political factors using a conceptual framework derived from the IMPACT Model (see **Appendix 2**).¹⁶ Programme and policy interventions reviewed, were divided into those implemented in India, and those employed Worldwide, and

included a combination of policy level, community level and individual level approaches.

Results:

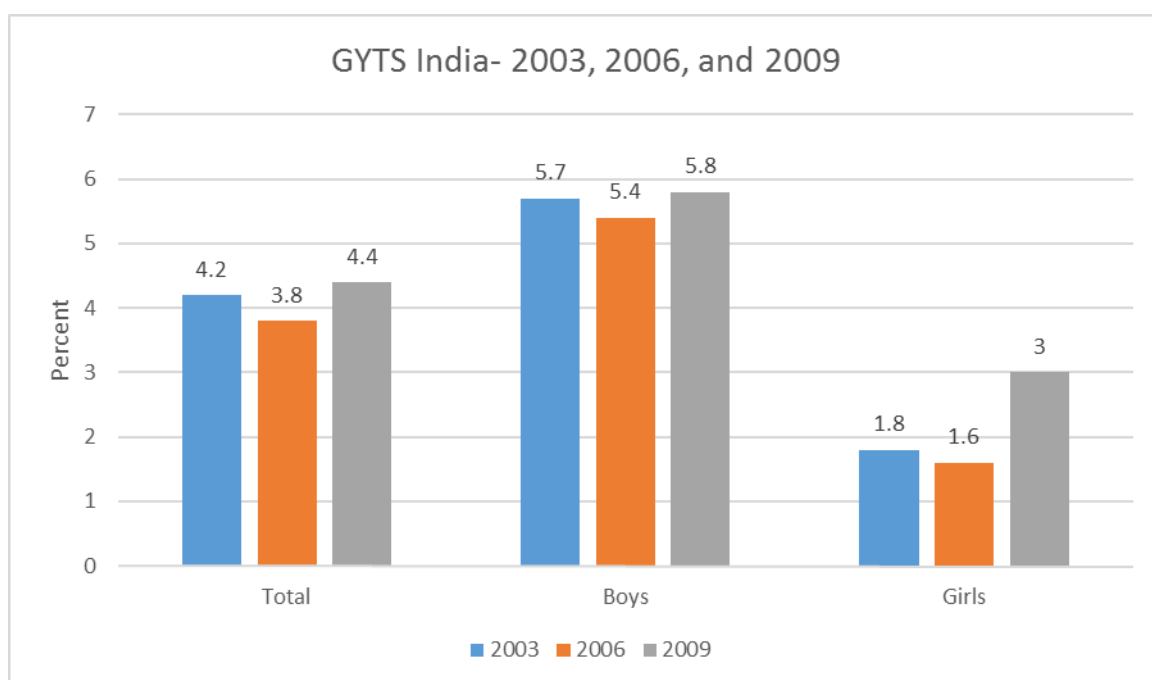
Prevalence:

Statistics on the prevalence of tobacco as “cigarettes” and “other tobacco products” were obtained and analysed using the Global Youth Tobacco Survey (GYTS) data from 2003, 2006 and 2009 for 13- 15year olds and the National Family Health Survey (NFHS3) data from 2005-2006 for 15-24 year olds. Data from both surveys can be used since they encompass adolescents as a whole together, wherein the former collects data on early (10-13 years) and middle (14-15 years) adolescents, while the latter contains data on late (16-19 years) adolescents, thus giving an overall analysis of the prevalence of tobacco use among three adolescent stages.¹⁴ Prevalence of tobacco use were calculated in the form of “current tobacco use” defined as the percentage of students who used any tobacco product for one or more day in the past 30 days, and “ever tobacco use” defined as tobacco used at least once in the lifetime, from the Global Youth Tobacco Survey (GYTS) and Global Youth Personnel Survey (GYPS).¹⁷

The Global Youth Tobacco Survey is a school based cross sectional survey carried out among 13-15 year olds from Grades 8,9, and 10 in randomly selected schools across six regions in India in three year intervals.^{18,19} The India GYTS conducted in 2009 presented the following results, amongst 13-15 year olds, 14.6% currently used any tobacco product (boys=19% and girls= 8.3%), 8.1% currently smoked cigarettes (boys=11.2 % and girls= 3.7%), 9.0% currently used smokeless tobacco (boys=11.1 % and girls= 6.0%) and 15.5% of never smokers are likely to initiate smoking next year.^{18,19} Current cigarette smoking did not change much between 2003 to 2009, but bidi smoking increased significantly from 2.2% in 2003 to 5.3% in 2009 for both boys

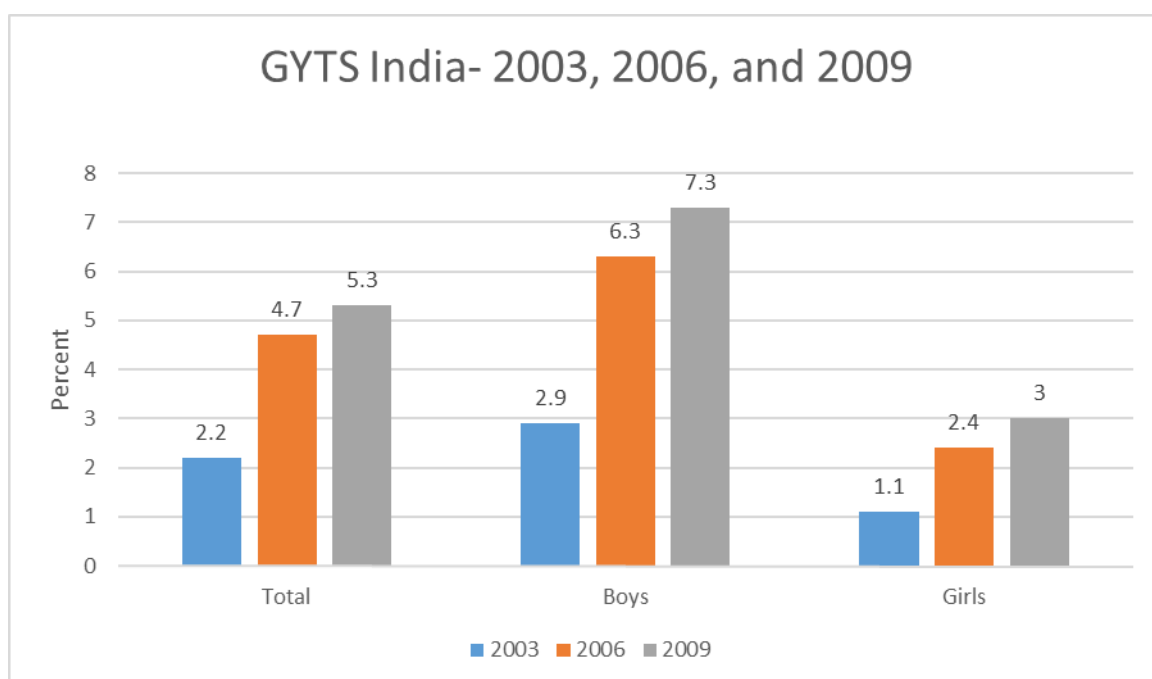
and girls, and boys were 2.4 times and 3.3 times as likely as girls to smoke cigarettes and bidis respectively (see **Figure 1 and Figure 2**).¹⁹ Current smokeless tobacco use decreased significantly from 2003 and 2006 but has remain unchanged until 2009, particularly the decrease was more marked in boys compared to girls (see **Figure 3**).¹⁹ Initiation of smoking before 10 years among ever cigarette smokers has decreased significantly nationally, especially in North and North East India, but has increased in Central India (GYTS 2003 and 2006) (see **Figure 4**).²⁰ Lifetime cigarette smoking and current tobacco use was highest in the North Eastern states of India (GYTS 2000-2005).⁶ Prevalence of current cigarette smoking was lowest (less than 1%) in 7 states- Delhi, Goa, Gujarat, Himachal Pradesh, Karnataka, Punjab and Tamil Nadu, and highest (over 15%) in four north eastern states- Manipur, Mizoram, Nagaland and Sikkim (GYTS 2000-2005).⁶ Current use of other tobacco products was lowest (less than 5%) in 8 states- Chandigarh, Delhi, Goa, Haryana, Himachal Pradesh, Karnataka, Punjab and Tamil Nadu, and highest (over 30%) in 8 states- Arunachal Pradesh, Bihar, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura (GYTS 2000-2005).⁶

Figure 1: Current Cigarette Smoking by Gender (13-15 year olds)



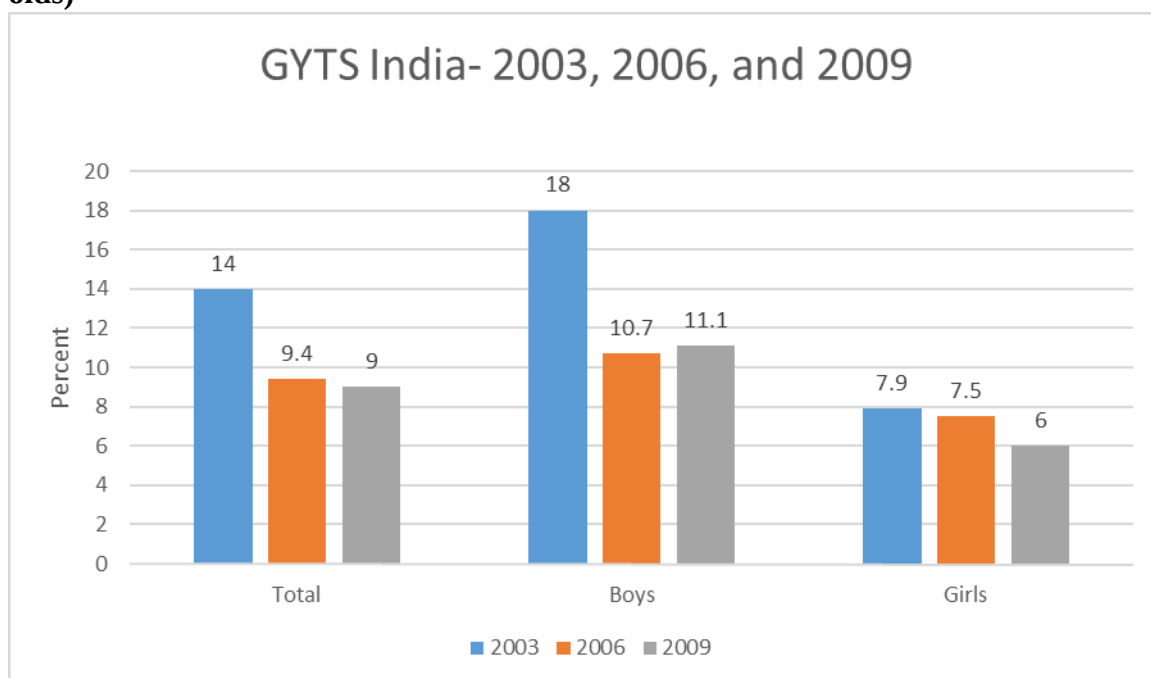
Source: *Tobacco use among students and teachers- findings from the global youth tobacco survey (GYTS) and Global School Personnel Survey (GSPS) | India 2003-2009* Ministry of Health and Family Welfare Government of India.

Figure 2: Current Bidi Smoking by Sex (13-15 year olds)



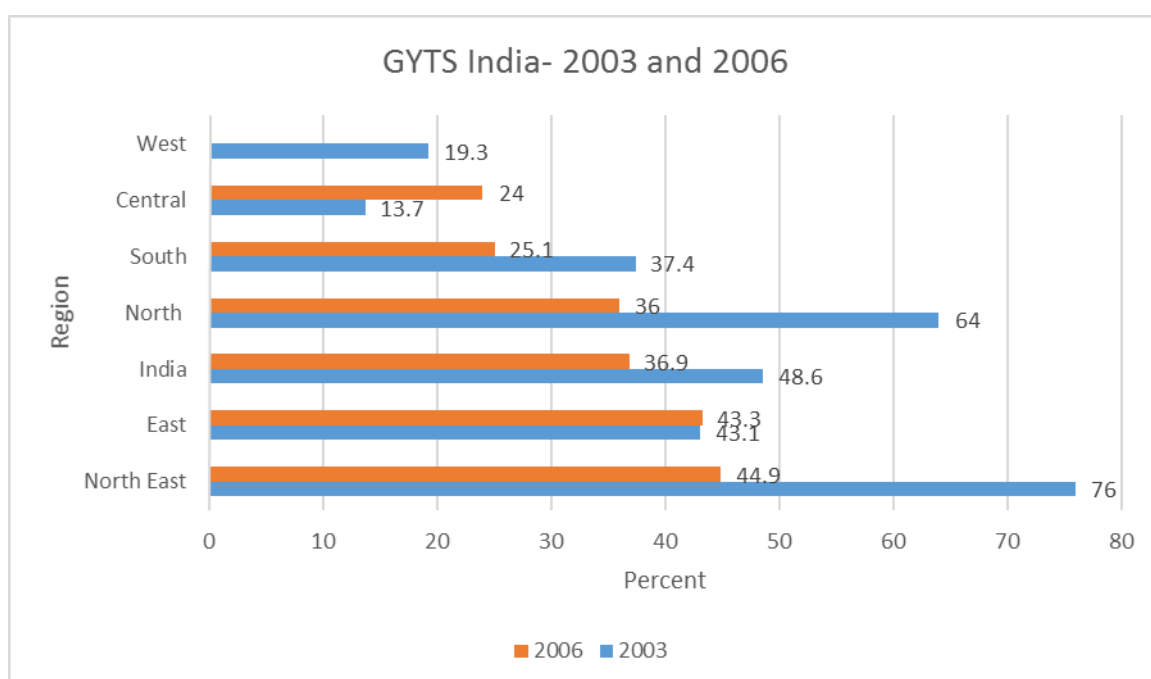
Source: *Tobacco use among students and teachers- findings from the global youth tobacco survey (GYTS) and Global School Personnel Survey (GSPS) | India 2003-2009* Ministry of Health and Family Welfare Government of India.

Figure 3: Current use of Smokeless Tobacco by Gender (13-15 year olds)



Source: Tobacco use among students and teachers- findings from the global youth tobacco survey (GYTS) and Global School Personnel Survey (GSPS) | India 2003-2009 Ministry of Health and Family Welfare Government of India.

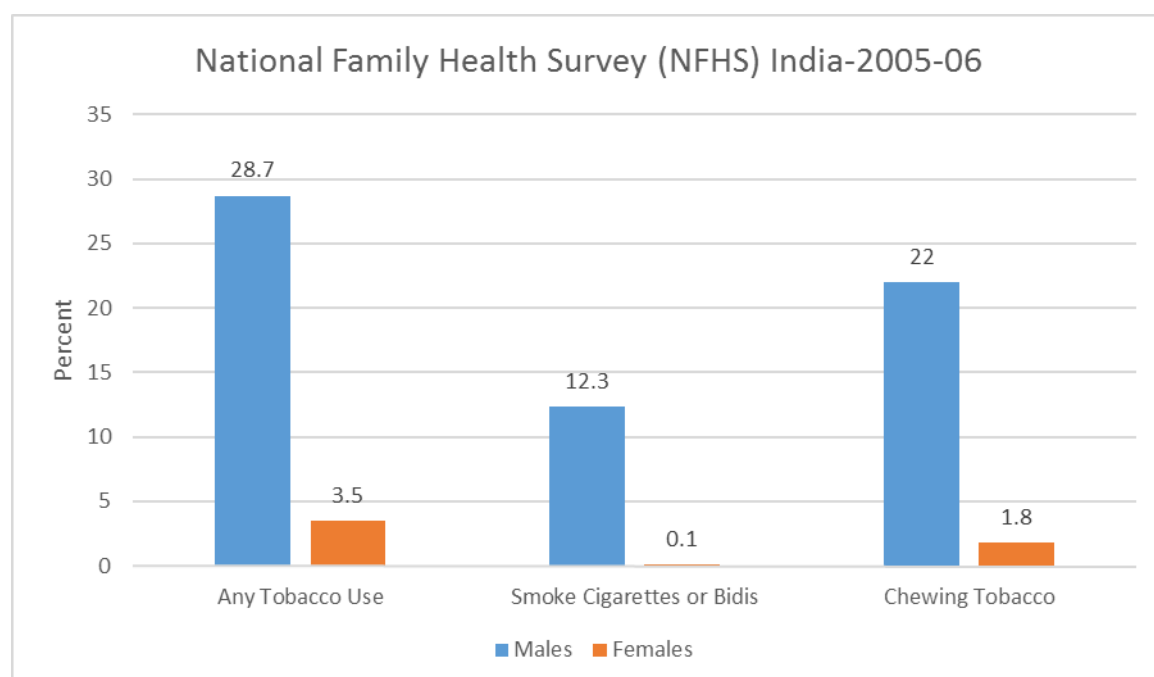
Figure 4: Percentage of Smoking Initiation in India before Age 10 among Ever Cigarette Smokers (13-15 year olds)



Source: Sinha, D. N. Tobacco control in schools in india (india global youth tobacco survey & global school personnel survey, 2006). New Delhi: Ministry of Health and Family Welfare- Government of India.

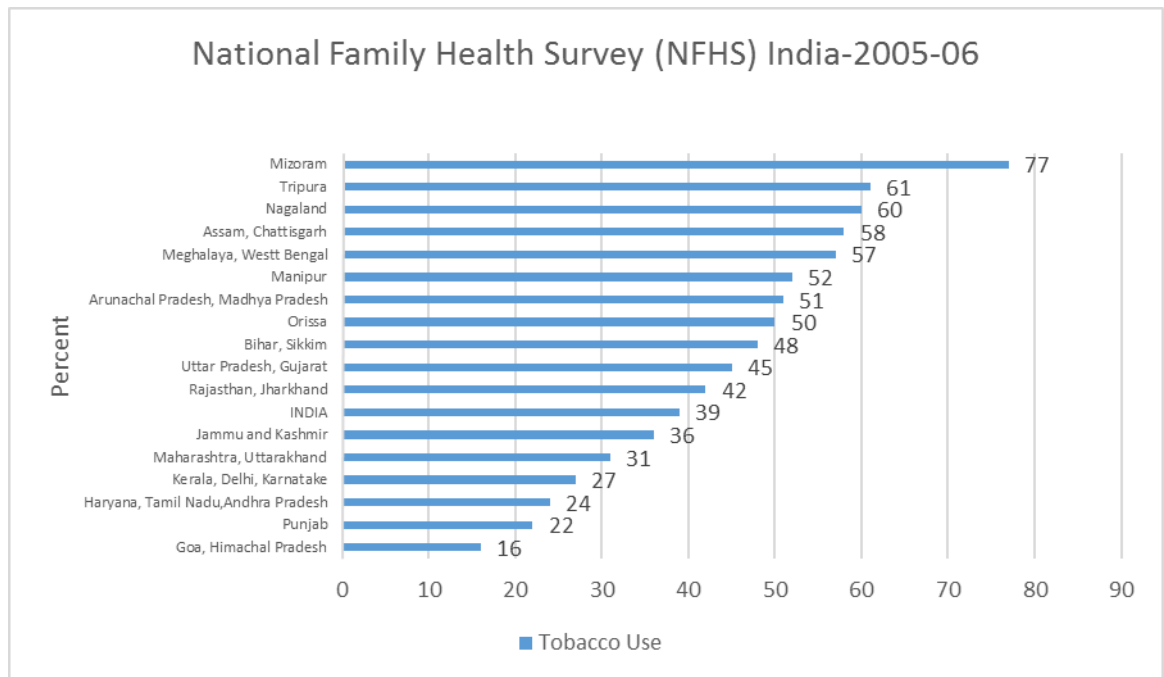
The National Family Health Survey (NFHS) collects and analyses data from a nationally representative sample.²¹ The National Family Health Survey (NFHS) from 2005-2006 for 15-19 year olds presented the following results, amongst males, 28.7% used any form of tobacco, 12.3% smoked cigarettes or bidis and 22% chewed tobacco; amongst females, 3.5% used any form of tobacco, 0.1% smoked cigarettes or bidis and 2.9% chewed tobacco (see **Figure 5**).²¹ State variations existed in tobacco use among 15-24-year-old males, ranging from 16% in Himachal Pradesh and Goa to 77% in Mizoram (see **Figure 6**).²¹ Tobacco use is highly prevalent among 15-24-year-old males in Kolkata where 50% use tobacco and lowest in Hyderabad and Chennai where one in five consume tobacco.²¹

Figure 5: Percentage of Males and Females who use any form of tobacco, smoked cigarettes or bidis and chew tobacco (15-19 year olds)



Source: Parasuraman, S., Kishor, S., Singh, K., & Vaidehi, Y. (August 2009). *National family health survey (NFHS-3) india 2005-06- A profile of youth in india*. Mumbai: International Institute for Population Sciences.

Figure 6: Use of Tobacco among Males State wise



Source: Parasuraman, S., Kishor, S., Singh, K., & Vaidehi, Y. (August 2009). *National family health survey (NFHS-3) india 2005-06- A profile of youth in india*. Mumbai: International Institute for Population Sciences.

Therefore, in India prevalence of tobacco is higher among adolescent males in comparison to females, in contrast to western countries (USA, UK, France) where prevalence across genders is relatively equal, and in countries such as China, Netherlands, Venezuela, Fiji and Jordan, where the prevalence of tobacco is higher in adolescent females compared to males.^{11,22}

Determinants:

The determinants for tobacco consumption were further categorized as Intrapersonal, Sociocultural, Environmental, Economic and Political factors using a conceptual framework derived from the IMPACT Model (see **Appendix 2**).¹⁶

- **Intrapersonal/Individual Factors: -**

Several studies have revealed an association of tobacco with reliving stress and anxiety.² Peer maladjustment, leading to isolation and seclusion from popular

peer groups in school are highlighted as important factors in initiating tobacco use among adolescents in several studies.¹¹ School maladjustment from poor academic performance and low aspirations to succeed, eventually resulting in dropping out from school are also factors encouraging use of tobacco.^{9,11} Individuals with low self-efficacy, low refusal skills and low self-esteem, tend to associate smoking with maturity and adulthood, which inspires them to smoke and concede to peer pressure.^{2,9,11,23,24} Smokeless tobacco products are commonly considered less harmful, with minimal ill health effects, are perceived to provide false benefits and are used in relieving abdominal pain, toothache and headache.^{14,25} In addition to the above factors, fun, inquisitiveness and obtaining assistance from sleeplessness and tiredness from extensive working were also responsible for initiation of tobacco use.^{2,14}

- **Socio-Cultural Factors: -**

Tobacco use is perceived as socially acceptable and a positive behaviour by adolescents in many segments of Indian Society, especially when asked by parents and teachers to purchase tobacco products from local shops.^{3,25,26} Acceptance of tobacco habits by adults and elders leads to tobacco being perceived as a desirable social norm.^{9,26,27} In Indian family tradition, the young are not permitted to smoke in the presence of elders as such a practice is termed disrespectful, yet the same culture is not applicable to smokeless forms and adolescents are rather encouraged to chew tobacco in the form of gutkha and pan masala, and eventually shift to smoking without their parent's knowledge.^{9,27,28} Further, enhancing personal image to appear "macho" are commonly cited as reasons by male adolescents to smoke, while females tend to consider smokeless

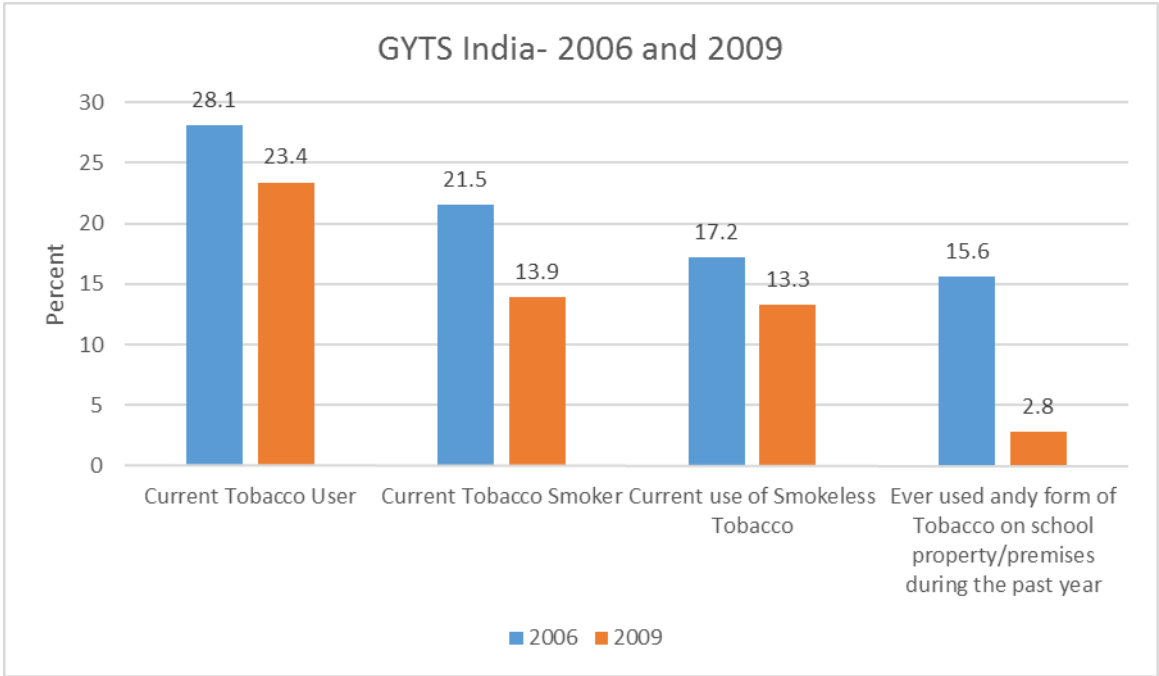
forms as more socially acceptable thus encouraging them to use.^{2,14} Girls generally are socially stigmatized to smoking but not to chewing tobacco, hence preferring use of the latter.²⁷ In addition, growing rapid urbanization, rising dependence on western culture and an eagerness to adopt a stylish lifestyle has led to increasing number of girls smoking cigarettes to challenge the male dominant Indian society and defy sociocultural norms.^{2-4,28}

- **Environmental Factors: -**

Subjective norms to tobacco use tend to develop when adolescents live in homes where parents, siblings or relatives smoke or chew tobacco, as well as when school teachers are seen smoking tobacco on premises.²⁶ Adolescents from nuclear families demonstrated higher probability to consume tobacco compared to those living in joint families due to constant adult supervision in the latter.^{4,11} Due to the widespread consumption of tobacco by family members and the culture of chewing tobacco openly, adolescents perceive tobacco use as a family tradition, and as family has a stronger influence on adolescents than peers in Indian culture compared to the West, adolescents tend to follow their family's footsteps in consuming tobacco.^{4,9} An adolescent surrounded with domestic problems and a tense family atmosphere, generally finds comfort in watching television, wherein tobacco companies promote their products through sports events, movies and television series depicting an image of a trendy and successful life. Such promotional activities project a false image of a normal life on an adolescent's mind, thus encouraging him to adopt such a lifestyle to escape the stressful home environment.⁹ Role models for adolescents such as parents, older siblings, favourite teachers, film and sports personalities, when consume tobacco, have a higher impact on encouraging experimentation,

initiation and persistent use of tobacco as a habit among adolescents.^{2,4,25,26} The Global School Personnel Survey (GSPS 2009) presents statistics on current tobacco use among school personnel, wherein 9.6% have ever used any form of tobacco on school premises in the past year (see **Figure 7**).¹⁹ Adolescents whose best friends smoke are more likely to smoke themselves, a trend observed more commonly among females over males.²² Peer influence particularly when attending schools where students smoked on campus was highly influential in initiation of smoking among adolescents.²² Apart from home and school environment encouraging tobacco consumption, “non-school going children, homeless and street children were also more likely to use tobacco”.²⁶

Figure 7: Current Tobacco Use among School Personnel (Teachers and Administrators)



Source: Tobacco use among students and teachers- findings from the global youth tobacco survey (GYTS) and Global School Personnel Survey (GSPS) | India 2003-2009Ministry of Health and Family Welfare Government of India.

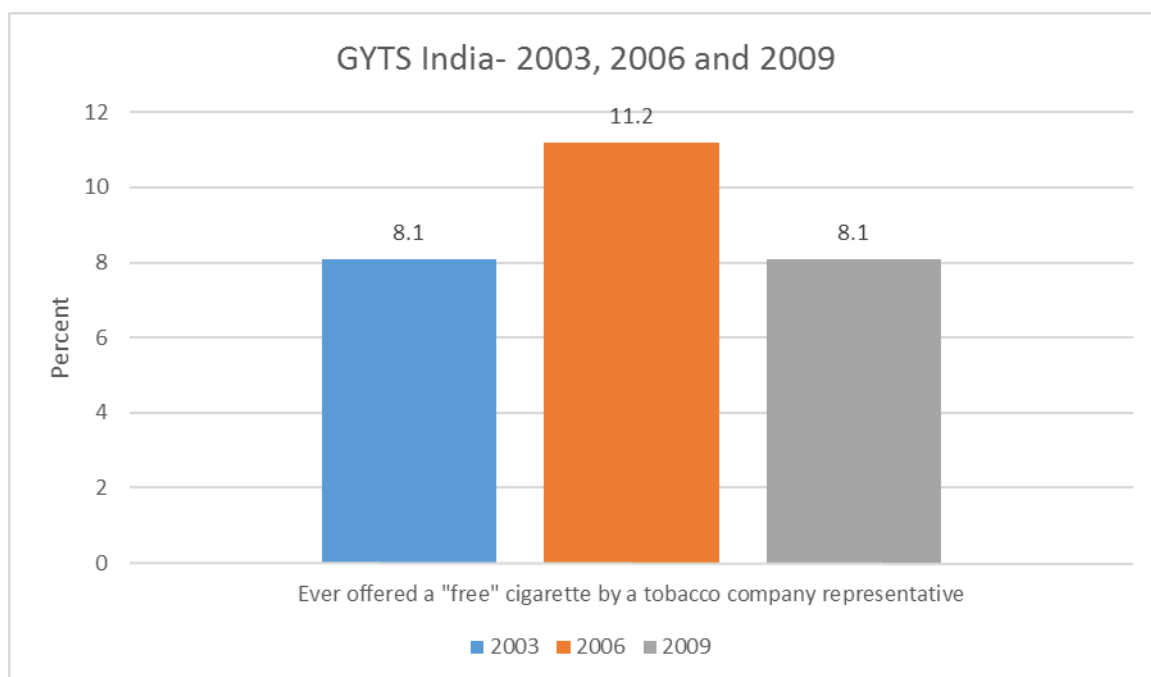
- **Economic Factors: -**

Tobacco products are easily accessible and available to adolescents in their communities.²⁶ Prevalence of tobacco consumption increased with decreasing socioeconomic status due to high consumption of tobacco among parents and peer groups of lower socioeconomic class and low literacy levels.²³ In addition, as smokeless tobacco forms are cheap, relatively inexpensive and highly available, adolescents of lower economic status use tobacco as a substitute to food.¹⁵ High tobacco use is also present in higher socioeconomic class adolescents who receive pocket money with which they purchase cigarettes.¹¹ In addition, tobacco products are also easily accessible close to school premises, thus violating the law.²³

- **Political Factors: -**

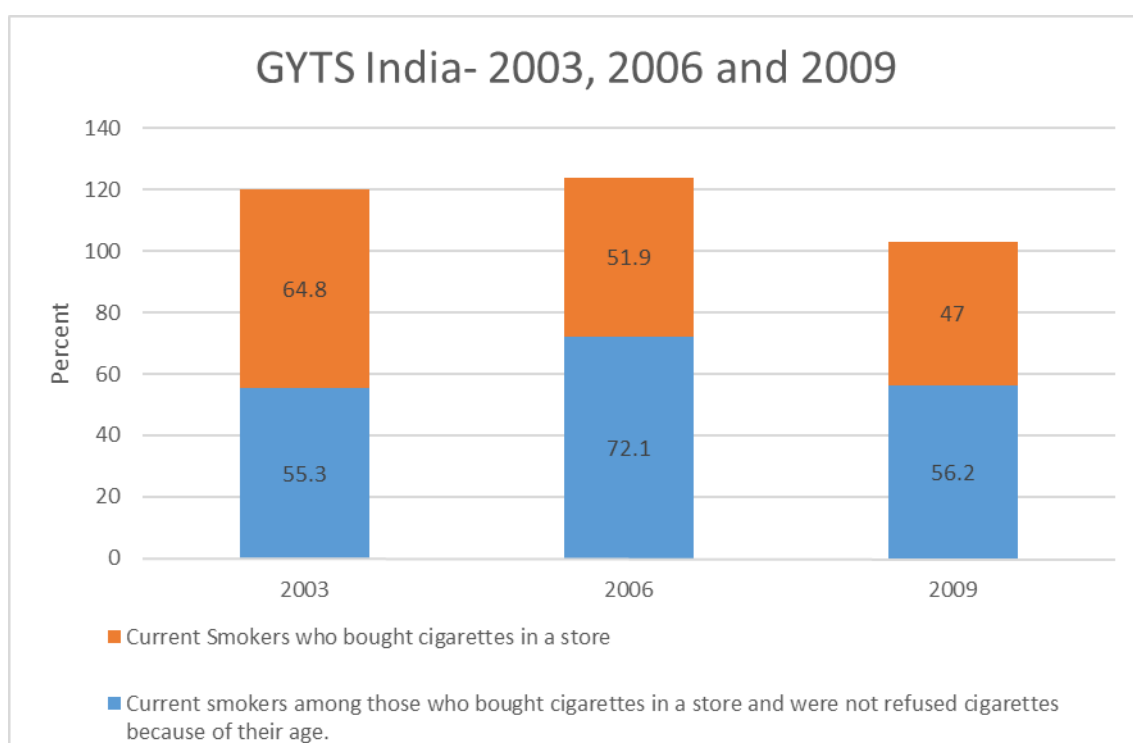
Tobacco industries have aggressively adopted various marketing strategies to promote sale of their tobacco products. Advertisement using print media and billboards have influenced tobacco consumption among adolescents.^{9,20} Exposure of students to indirect advertising in the form of free cigarettes offered to students is a strategy adopted by tobacco industries for promotion of tobacco products and eventually increasing sales (see **Figure 8**).¹⁹ In spite of the COTPA Act banning sale of tobacco products to minors, yet current cigarette student smokers have reported purchasing cigarettes from stores and over half (56.2%) were not refused by shopkeepers on account of their age (see **Figure 9**).¹⁹ Additionally, poor enforcement of legislation has further reduced efforts to discourage adolescents from initiating tobacco use.²⁶

Figure 8: Students who were offered Free Cigarettes



Source: Tobacco use among students and teachers- findings from the global youth tobacco survey (GYTS) and Global School Personnel Survey (GSPS) | India 2003-2009 Ministry of Health and Family Welfare Government of India.

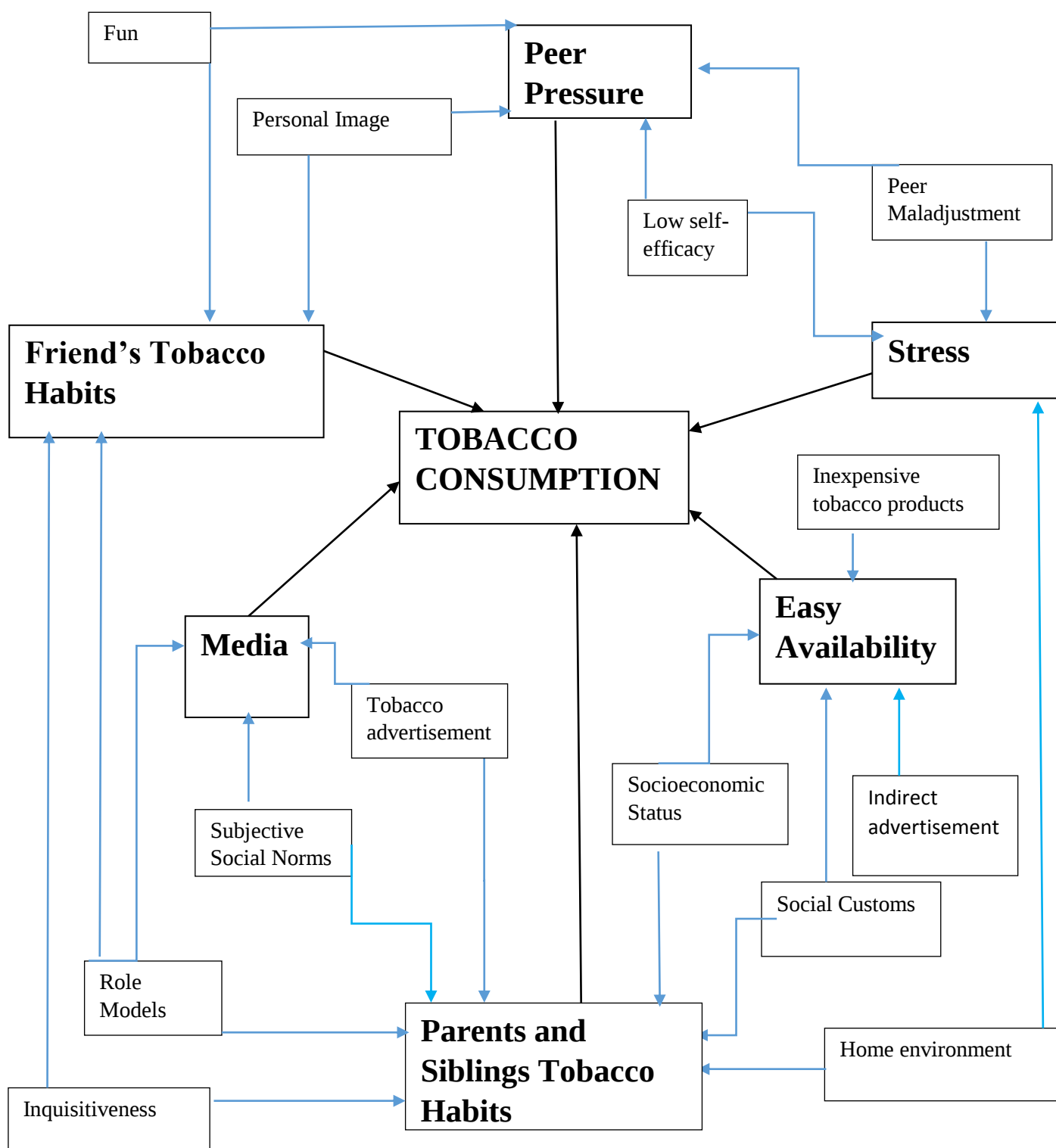
Figure 9: Current Cigarette Smokers who bought Cigarettes in a store and were not refused purchase because of their age-



Source: Tobacco use among students and teachers- findings from the global youth tobacco survey (GYTS) and Global School Personnel Survey (GSPS) | India 2003-2009 Ministry of Health and Family Welfare Government of India.

The above determinants can be further categorized as proximal and distal determinants to tobacco consumption among adolescents in India as shown in **Figure 10** below, from the literature presented earlier.^{2-4, 11, 14, 15,19,20,22-28} Proximal determinants are those determinants that are directly and largely responsible for influencing tobacco consumption among Indian adolescents as suggested from several studies, while distal determinants are those that indirectly contribute to influencing tobacco consumption through impacting the proximal determinants. Proximal determinants are indicated by black arrows. Distal determinants are shown in blue arrow

Figure 10: Box and Arrow Diagram



Policy and Programme Interventions:

“A multi-level intervention framework to prevent and control tobacco among adolescents and children, termed as IMPACT (Intervention Model for Protecting Adolescents and Children against Tobacco)”, is an evidence based behaviour specific model created on “an overlap of social cognitive theory and socio-ecological model of health behaviour”.¹⁶ The above comprehensive framework was designed by Arora, M., Mathur, M. R., & Singh, N on the basis of evidence reviewed through literature on multiple policy, community and individual approaches from developed and developing countries to help comprehend the determinants and interventions pertinent to Indian context.¹⁶ This multi- level model addresses the intrapersonal, socio-cultural, environmental, economic and political determinants that influence tobacco consumption among adolescents, and through comprehensive interventions involving the school, parents and communities, aims to successfully reduce tobacco prevalence rates among adolescents.¹⁶ The framework is designed on the principle of promoting a sustainable behavioural change towards tobacco use among adolescents by creating a socio-cultural environment that supports “no- tobacco use”; by de-normalizing tobacco use as a social norm; by educating adolescents, society and parents on tobacco control; and by providing social support for adolescents motivated to quit consuming tobacco.¹⁶ The IMPACT Model is a combination of policy level approaches (increase taxation on tobacco products, protection from second hand smoke, health warnings on tobacco products, prohibiting tobacco advertising promotion and sponsorship known as TAPS, and restricting access to minors), community level approaches (school based health programs, youth advocacy and empowerment, mass media campaigns and tobacco free homes and communities), and individual level approaches (health facilities, worksites and using quit lines).¹⁶

The following evidences on policies and programs resulting in reduction of tobacco consumption rates among adolescents in India and worldwide are based on the above approaches suggested by the IMPACT Framework.

India:

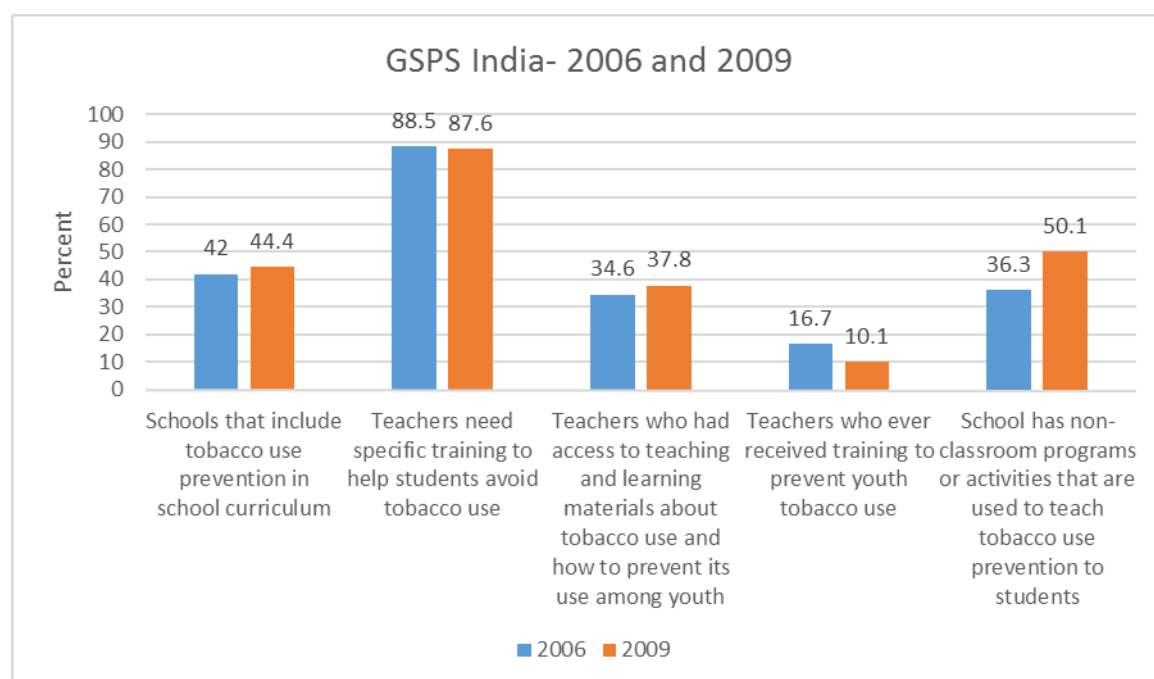
“The Government of India legislated a comprehensive tobacco control policy in May 2003- the Cigarettes and Other Tobacco Products (Prohibition of Advertisements and Regulation of Trade and Commerce, Production, Supply and Distribution) Act (COTPA)”.¹⁹ “The Act is pertinent to all tobacco products in both smoke and smokeless forms such as cigarettes, cigars, cheroots, bidis, gutkha, paan masala containing tobacco, khaini, mawa, mishri, snuff, ets as detailed in the “Schedule” to the Act (see **Appendix 3** for main provisions of the Act)”.¹⁹ To implement the various provisions under the Act, 21 out of the 35 states/union territories have implemented the National Tobacco Control Programme (NTCP) in 2007-2008.⁵ Under the NTCP, some major initiatives undertaken are – a national level mass media campaign on anti-tobacco messages for creating awareness on harmful health effects of tobacco launched on television and radio in 18 languages, a research project on studying alternate crops to tobacco for tobacco growing farmers, and the Global Adult Tobacco Survey (GATS) to study the prevalence of tobacco use among adults.⁵ In collaboration with WHO, the Indian government has set up “Tobacco Cessation Centres (TCC) across the country in cancer treatment hospitals, psychiatry hospitals, medical college, NGOs and community locales to support tobacco quitting”.⁵ TCCs have now been labelled as “Resource Centre for Tobacco Control” (RCTC) to provide tobacco cessation services, help in capacity building of other institutes to develop tobacco cessation facilities and organize outreach community programs for awareness in school, colleges, slums and workplaces.⁵ At educational institutes, many medical, dental colleges and general and

TB hospitals have set up tobacco cessation clinics.⁵ The Indian Dental Association (IDA) has initiated a tobacco training initiative to train dental professionals in providing tobacco cessation services.⁵ The Government has also organized “advocacy workshops” to “train enforcement officials from various departments like police, food, drugs, health, labour, transport, etc. who have been authorized to enforce COTPA provisions”.⁵ “A website (<http://www.chewonthis.in>) launched jointly by the Ministry of Health and Family Welfare and Tata Memorial Hospital as an advocacy platform to highlight the harmful effects of smokeless tobacco products”.²⁸ Taxation on tobacco products, particularly cigarettes and gutkha have led to a 10% increase in price, 4-9% decrease in tobacco consumption and preventing initiation among adolescents.¹⁶ The COTPA Act prohibits smoking at public places and advertising of all forms of tobacco except on pack, in pack and point of sale advertisements.¹⁶ The government has recently added legislation on pictorial health warnings and warnings on prohibiting sale to minors at point of sale boards.¹⁶ A study conducted for individuals above 15 years of age in Mumbai and Thane concluded that 88.5% of the people preferred strong pictorial health warnings on tobacco packs and 33.1% of never smokers said that they will “think twice before starting smoking”.¹⁶

Laws enacted by the government to decrease initiation and use of tobacco among adolescents are- “prohibition of sale of tobacco products in and within 100 metres of any educational institution, mandatory display of warning boards against tobacco use by school administration at conspicuous places, and prohibition of sale of tobacco to and by minors”.¹⁶ As a result of the above policies, evidence demonstrates a decrease in initiation of tobacco use by adolescents through a diminution in total tobacco sale outlets around school premises.¹⁶

The Government of India in collaboration with WHO have circulated guidelines for tobacco free schools/ educational institutions (see **Appendix 4**).¹⁹ Tobacco prevention curricula was included in four out of ten schools, one third of teachers had access to teaching and learning materials about tobacco use, one third of schools did not have tobacco free policies, and 90% of schools that had policies successfully enforced them (see **Figure 11 and 12**).¹⁹ The Global School Personnel Survey, 2006 revealed that most of the school personnel were supportive to adolescent tobacco control issues (see **Figure 13**).²⁰ About 63.3% of students reported being taught about the dangers of smoking in schools (see **Figure 14**).¹⁹ Schools that have adopted tobacco free policies in India ranged from 22% in the Eastern states to 48.4% in the Northern states (see **Figure 15**).²⁰

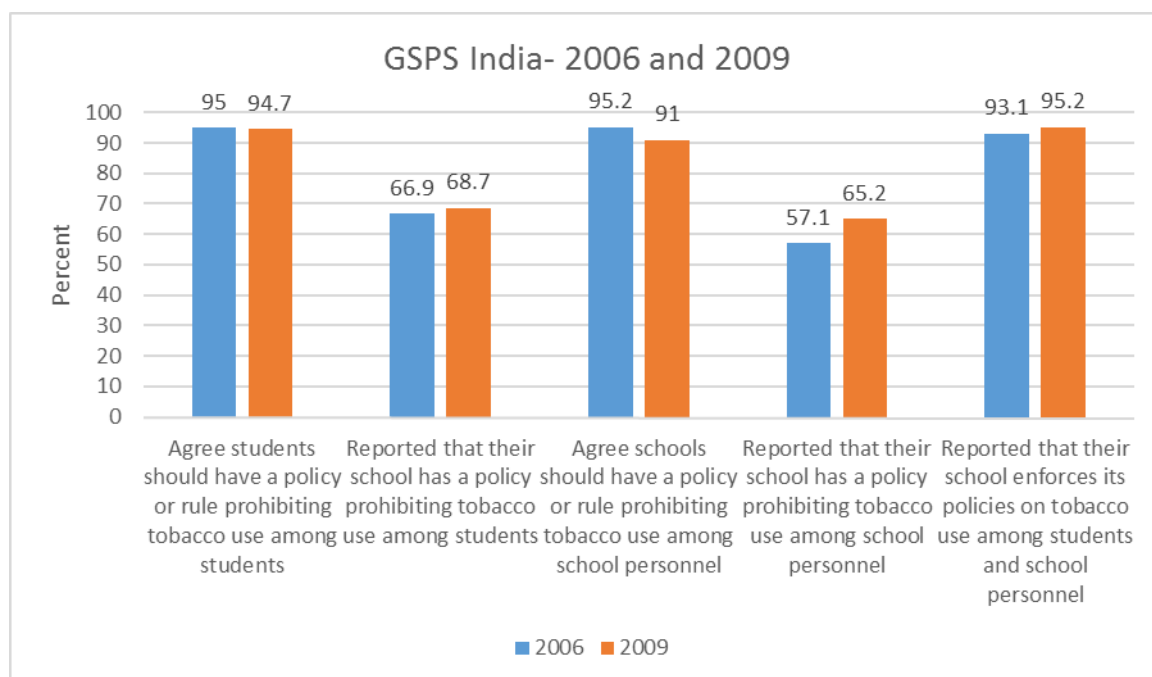
Figure 11: Access to Teaching Materials and Training of School Personnel



Source: Tobacco use among students and teachers- findings from the global youth tobacco survey (GYTS) and Global School Personnel Survey (GSPS) | India 2003-2009 Ministry of Health and Family Welfare Government of India.

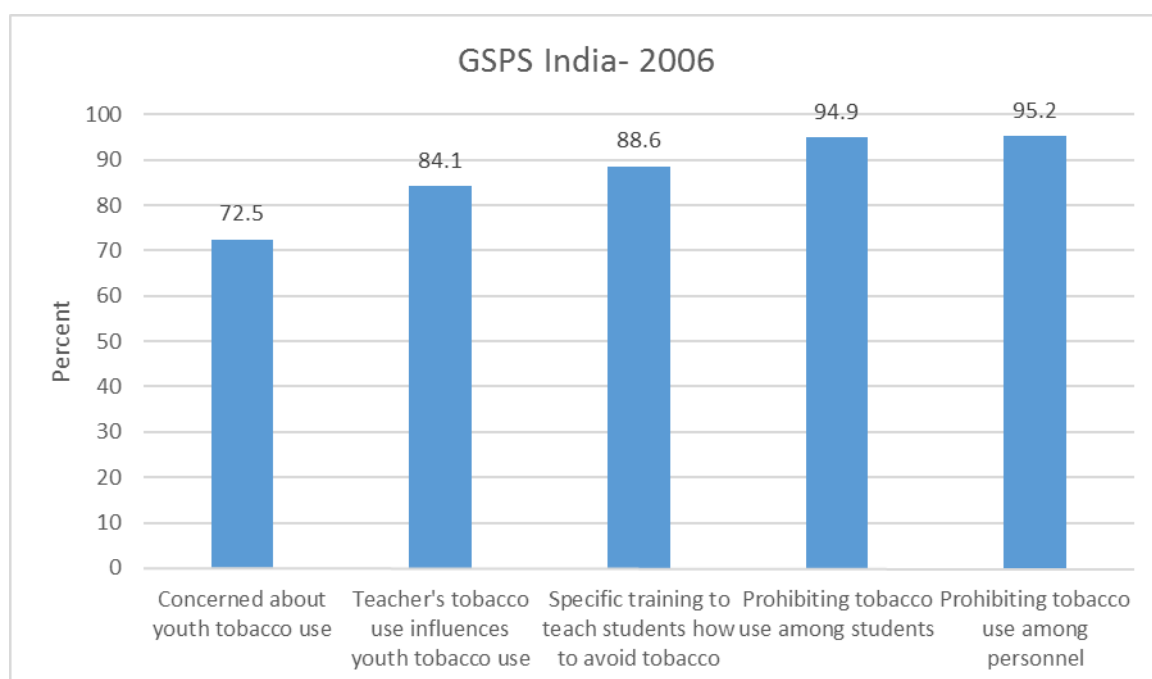
Figure 12: School Policies regarding Tobacco

Use



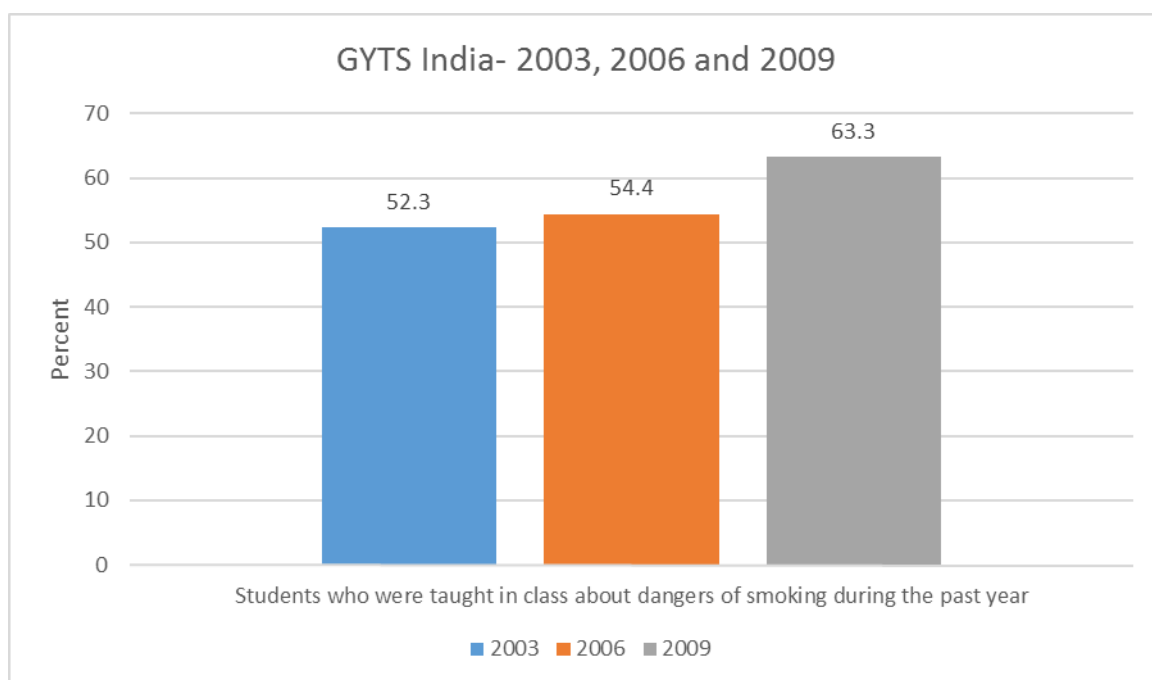
Source: Tobacco use among students and teachers- findings from the global youth tobacco survey (GYTS) and Global School Personnel Survey (GSPS) | India 2003-2009 Ministry of Health and Family Welfare Government of India.

Figure 13: Attitude of School Personnel towards Tobacco Control in India



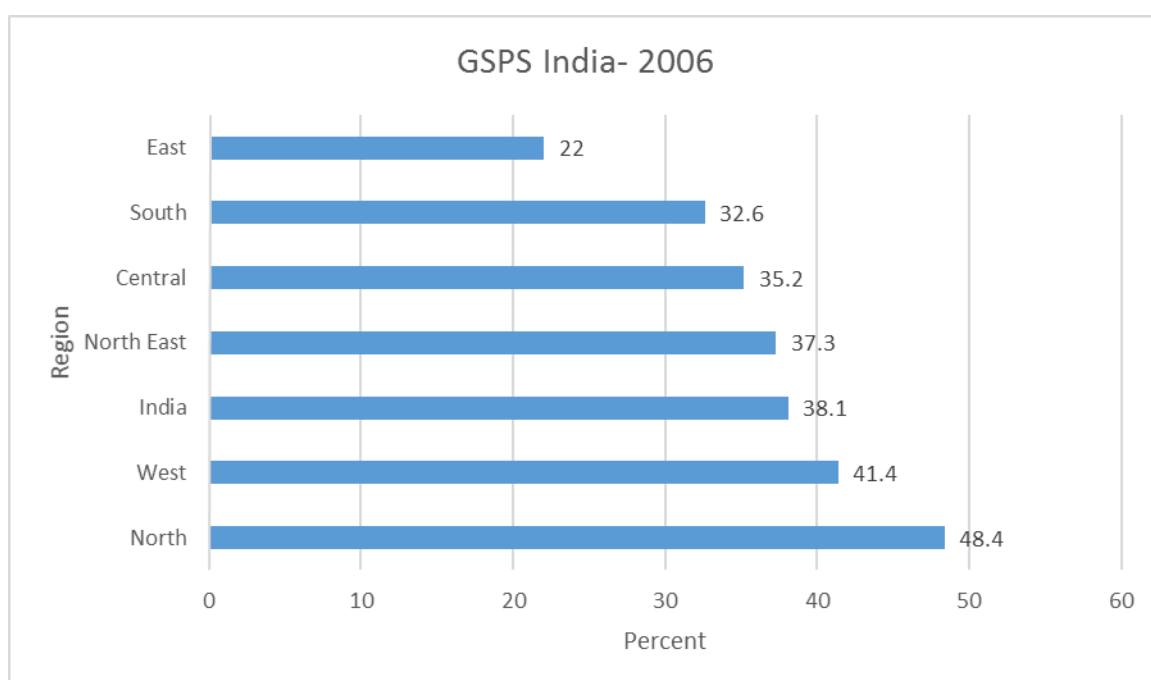
Source: Sinha, D. N. Tobacco control in schools in india (india global youth tobacco survey & global school personnel survey, 2006). New Delhi: Ministry of Health and Family Welfare- Government of India.

Figure 14: Students who were taught about the dangers of tobacco smoking in school



Source: *Tobacco use among students and teachers- findings from the global youth tobacco survey (GYTS) and Global School Personnel Survey (GSPS) | India 2003-2009* Ministry of Health and Family Welfare Government of India.

Figure 15: Tobacco free policies in Indian schools by Region



Source: Sinha, D. N. *Tobacco control in schools in india (india global youth tobacco survey & global school personnel survey, 2006)*. New Delhi: Ministry of Health and Family Welfare- Government of India.

Specific community and school based interventions targeted at adolescents are as follows-

- “MYTRI (Mobilizing Youth against Tobacco Related Initiatives), a school based multi strategy intervention for sixth to eight grade students was conducted from 2004-2006 in government and private schools in Delhi and Chennai”.²⁹ The project had four components- a behavioural component with peer led classroom activities, a second component that involved hanging posters in the school premises, a third component was parental involvement and fourth component “focused on peer led health activism outside classroom”.²⁹ Project MYTRI is a peer led approach that concentrated on peer student discussions and participation than teacher led instructions alone, hence was successful in decreasing overall tobacco use by 17%, decreased intention to smoke by 11%

and intention to chew tobacco by 28% in the intervention group.^{16,29} The intervention was more successful in decreasing rates for smoking forms such as bidi and cigarettes, than smokeless forms as more information on the former was provided.²⁹ Nevertheless, the project was successful in decreasing initiation rates, particularly among girls and sixth graders.²⁹

- “A school based program- HRIDAY CATCH (Health Related Information Dissemination amongst Youth, Child and Adolescent Trial for Cardiovascular Health published in 2011)”, focused on “increasing sensitization and acceptance of health related lifestyle interventions” by schools as a part of their normal school activities.²⁸ Post one year of the program, students in the intervention group were significantly less likely to experiment, initiate and be received or offered tobacco in comparison to controls.²⁸
- “ASPIRE (Smoking Prevention Interactive Experience) is a school based intervention for high school students, that included a computer based smoking and cessation curriculum” in the intervention group in comparison to a self-help booklet provided to the control group.³⁰ The smoking initiation rates were lower among baseline non-smokers in the intervention group after eighteen months, compared to the control group.³⁰
- “ACTIVITY (Advancing Cessation of Tobacco in Vulnerable Indian Tobacco consuming Youth), a community based randomized control trial was held among 10-19 year olds, living in 14 low income disadvantaged slums in Delhi”.^{26,27} Key findings obtained from focus group discussions held with youth and adults living in the slums, helped develop the intervention model.²⁶ To address the various intrapersonal and socioenvironmental determinants of tobacco, training workshops for NGO, adult and peer leaders, community based outreach

programs, community based cessation services and clinics, and policy enforcement activities were held to reduce prevalence of tobacco use by decreasing experimentation and initiation, and to increase cessation attempts.²⁶

The project was a successful community based peer led multi component intervention that showed a reduction in use and fresh uptake of tobacco in the intervention group compared to control.²⁷ Salivary nicotine levels of the participants were assessed to authenticate and validate the results.²⁷

- To promote youth advocacy and empowerment, an e group called the “Global Youth Action on Tobacco (GYAT) Network” was created as a platform for youth advocacy and to share their experiences on controlling and quitting tobacco.¹⁶
- “Youth advocacy platforms such as Youth for Health (Y4H)”, is a global alliance for engaging the youth in tobacco control, and is a strategy to promote youth led tobacco control both in India and globally.¹⁶

Worldwide:

At the policy level, examples of comprehensive legislatures that have led to a decrease in prevalence of tobacco among adolescents are from Australia, Canada, Thailand and California state of United States of America. The Australian Federal Government has increased prices on cigarettes, imposed restrictions on smoking in public places including government schools and school ground campuses, compulsory requirement of health warnings covering 90% of the back and 30% of the front and is the first to adopt plain packaging, comprehensive ban on all forms of advertising including point of sale advertisements, restrictions on youth access to cigarettes and inclusion of smoking prevention activity in curriculum of primary and secondary schools.³¹ As a result, smoking prevalence among 12-17 year olds has decreased from 26% in 1996 to 10% in

2008.³¹ The Canadian National Strategy on Tobacco Control has a Tobacco Reporting Regulation Act that requires a detailed report submission on tobacco products, their composition, emissions, sales, packaging and research to the Ministry of Health; and a Tobacco Products Information Regulation Act necessitating that every tobacco product must display health warnings and smoking cessation messages on packs.³² Health warning requirements in Canada are considered the best globally and widely supported by Canadians, making smoking less attractive and motivating 87% of both adults and youth to quit.^{28,32} Additionally, due to the above legislature, many foreign cigarette manufacturers have halted exports of their products to Canada to avoid disclosing their product constituents to the Canadian government.³² Thailand, a middle income country is the fourth country to adopt more than 50% coverage of health warnings on packs after Canada, Brazil and Singapore.³³ Three components of tobacco control in Thailand of noteworthy importance is stepwise implementation of smoke free laws currently encompassing work places, all indoor and open public places, except in designated smoking areas of international airports; strong lobbying and advocacy efforts by NGOs and civil society organizations; and an extra taxation of 2% by tobacco and alcohol companies that is used to fund ThaiHealth, a Thailand Health Promotion activities office intended to reduce non communicable disease burden by funding prevention activities for the same.³³ Thus, the antismoking movement initiated in Thailand with support from the government, civil society organizations and NGOs, Thailand as a community has de normalized smoking in the social environment and helped advance strict policies aimed at a complete ban of tobacco products at and near educational institutions and a ban on their sale to adolescents below 18 years of age.^{33,34} As a result, percentage of current adolescent smokers (13-17 years) in Thailand is 3.2%, and percentage of adolescents (13-17 years) experimenting with cigarettes is at 12%.³⁴ Anti-

tobacco messages in the media and education provided in schools of Malaysia and Thailand have proven to not only increase the knowledge and alter the perceptions of adolescents towards smoking, but also has a direct effect in influencing the susceptibility of adolescents to smoke, particularly among female adolescents in Malaysia.³⁴ Additionally, Malaysian current adolescent smokers (13-17 years) are 2.4% and 11% of adolescents experiment with cigarettes.³⁴ California state of USA, launched a comprehensive programme focused on de-normalizing social norms and advocacy of school education programmes to encourage schools to fully implement tobacco free school policies in campuses in order to receive school funding from the state government.³¹ As a result, California has the lowest smoking prevalence rate at 13% in the country.³¹ Turkey is the first country to achieve all six MPOWER measures at the highest level, is a smoke free country whose cigarette prices have increased by 62% between 2009 and 2010.^{28,35} “Bhutan is the first country in the world to impose a total ban on sale and use of tobacco products”.⁵

At the community level, adult focused anti-smoking media campaigns in Australia and Brazil displaying strong graphical and real life emotional and harmful messages with a fear appeal, coupled with promoting cessation messages, has a larger impact on adolescents by affecting the cognitive component of attitudes and in evoking a change in attitude in the direction of the emotion addressed.^{28,36} As a result, adolescents have made attempts to quit, and talk to family and friends openly about tobacco consumption without the fear of social stigma.³⁶ In addition, well-funded media campaigns in the states of California, Massachusetts and Florida, that are focused on counteracting and highlighting the industrial efforts to target adolescents and obscure the additive and harmful effects of tobacco through denial, have been proven effective in altering the perceptions of adolescents towards accepting tobacco as a social norm and in

comprehending the industry's dishonest practices for promotion of tobacco.³⁷ Tobacco control is not a top priority for the Chinese government due to conflicting interests between the State and the state owned largest and most profitable monopolized tobacco manufacturing company, the China National Tobacco Corporation.³⁸ As a result, to educate the public, a media campaign titled "Giving Cigarette is Giving Harm" was launched wherein cigarette giving as gifts was equated with causing harm by linking cigarettes to images of diseased organs and death.³⁸ The above campaign resulted in greater disagreement and disapproval of giving cigarettes as gifts, thus discouraging their use and increasing knowledge on harmful effects caused by smoking.³⁸ An "informal school based peer led intervention for smoking prevention in adolescents was conducted among 12-13 year olds in England and Wales, known as ASSIST (A Stop Smoking in Schools Trial)".³⁹ The intervention was peer led, and consisted of at least 15% of peer led supporters elected from among the students by the students themselves.³⁹ Informal conversations were held on the injurious effects of smoking between the supporters and the students during breaks, lunchtime, after school hours and while travelling to and from schools, and smoking as an undesirable behaviour was instilled among the students by the peers.³⁹ The above peer led intervention was based on diffusing behavioural norms amongst adolescents residing in a closed community, to strengthen social support.³⁹ The peers selected could also be smokers if shown a desire to quit was of remarkable importance in the intervention.³⁹

Educational messages combined with personalized and custom-made support messages for quitting received a greater positive and affirmative response from smokers.²⁸ Multilingual telephone quit lines for Asian smokers reported sustained cessation especially when combined with pharmacological interventions.²⁸ A school based cessation program termed SMART (Self-Management and Resistance Training), a

worksite based behavioural tobacco intervention model for 15-18 year olds to promote tobacco cessation through interactive and non-interactive activities was found quite effective for 84% of the adolescents.^{16,40} The above program targeted working teens in an outside school setting, and was based on influencing socioenvironmental, personal, behavioural and life skill factors to quit smoking.⁴⁰

Discussion: -

Tobacco consumption is a complex problem due to the availability of tobacco in various smoke and smokeless forms, and due to an array of determinants responsible for inducing a behavioural acceptance towards tobacco usage among adolescents. In terms of policy and community approaches towards tobacco control and prevention adopted in India, progress has been made particularly in awareness and attitudes of adolescents towards smoking in public places, wherein 57.9% students agreed that smoking was harmful to themselves and others, and 74.8% agreed that smoking must be banned in public places (GYTS).⁴¹ Yet, 15.5% of never smokers are likely to initiate smoking next year.^{18,19} Regardless of legislature advocating against tobacco present in the country, the tobacco industry have repeatedly tried to exploit loopholes in the current legislature. Tobacco companies in India with high market shares are Indian Tobacco Company Ltd (ITC) (the largest tobacco manufacturing company in India and an affiliate of British American Tobacco), Godfrey Phillips India (GPI) (a Phillip Morris affiliate) and Vazir Sultan Tobacco (an affiliate of British American Tobacco).⁴² Despite amendments and provisions mentioned in the COTPA act regarding advertisement of tobacco products, violations are present wherein advertisement boards of larger size are placed over warehouses, juice and sweet shops, grocery outlets, closed shops and near shops that sell products for children, adolescents and youth.⁴³ In addition, pan masala advertisements have been repeatedly used as surrogate advertisements for tobacco

products as people falsely perceive all pan masala products including those without tobacco as a form of tobacco product.⁴⁴ Tobacco companies have taken advantage of such illusions to advertise their tobacco products through pan masala advertising, as visible for brands such as Pan Parag, Goa 1000, Rajnigandha amongst others, thus increasing consumption of pan masala products by adults and adolescents.⁴⁴ Of particular interest is point of sale advertisement of tobacco products wherein provisions for the same are not clearly outlined in the COTPA act.⁴³ Alternative strategies adopted by tobacco companies for promoting their products are- indirect advertising through point of sale retail outlets such as street side peddlers and convenience stores; placing tobacco advertisements close to posters advertising children's products; trade diversification through selling clothing lines such as Wills Lifestyle, John Players and by selling stationary items, greeting cards and packaged foods for brand stretching; product placement in movies; and sponsorship of sports events and awards such as Red and White Bravery award by Godrej Phillips India a tobacco company.⁴² The industry is also involved in sponsoring tobacco prevention efforts in schools to discourage smoking among adolescents but instead use above promotional events as a strategy to increase public support within the community, delay the passing of anti-tobacco legislation and in reality to endorse an increase in initiation and sale of tobacco products among adolescents.³¹ Increased price of cigarettes from taxation has led to many customers including adolescents (for satiating their tobacco addiction) to switch to smokeless form of tobacco from cigarettes, thus inducing mobile cart vendors to increasingly sell smokeless forms in particular gutkha and pan masala as compliance to the ban of these products is low.⁴⁵ Additionally, tobacco selling outlets are present within 100 metres of educational institutions with no signage banning their presence.⁴⁹ Tobacco products are sold to minors with non-compliance for display of warning boards against the sale of

tobacco products to minors, particularly widespread in Odisha, Delhi, Mumbai and Tamil Nadu.⁴⁵

Hence, the above tactics practiced by the tobacco industry are a means to increase experimentation and initiation of tobacco products among adolescents through the use of persuasive communication strategies targeting the cognitive component of attitude and perception of adolescents. The innovative marketing and promotional strategies are ways to create a psychological environment for adolescents to associate their brand image with a socially desirable lifestyle. As a result, adolescents perceive tobacco as beneficial rather than viewing them as harmful. Adolescents are immature in decision making, hence their inherent risk taking behaviour coupled with their perceptions of being invulnerable to the health consequences of tobacco, makes it imperative to highlight the immediate short term consequences of indulging in tobacco consumption.⁴⁶ Therefore, a continuous, holistic and comprehensive approach is necessary to address such institutional barriers and therefore reduce the adherence of adolescents to tobacco industry created sensitivities, to ensure disengagement of such normative beliefs, and encourage acceptance of tobacco as a threat to their social lifestyle and healthy well-being.

As a result, the above data advocates the need to address tobacco control from a holistic approach with all-inclusive wide-ranging policies and programs focusing on both demand side and supply side interventions.⁴⁷ Demand side interventions include increased taxes, non-price interventions (smoke free laws, total ban on advertisement promotion and sponsorship of tobacco products, pictorial warnings and media campaigns) and increased access to cessation therapies, while supply side includes limiting youth access to tobacco, crop substitution and diversification for tobacco farmers, direct prohibition of tobacco sale and usage, restrictions on tobacco trade and

strict penalties to control smuggling.⁴⁷ Demand side interventions have proven cost effective particularly for low and middle income countries in reducing tobacco consumption rates among adolescents.⁴⁷ A comprehensive programme to decrease tobacco use especially effective for adolescents must include national and community interventions, mass media campaigns that specifically counter market the tactics adopted by tobacco companies, strict enforcement of legislation and effective surveillance and evaluation to monitor tobacco control efforts.⁴⁷ Recommendations for a holistic comprehensive policy, particularly involving demand side interventions that have proven effective and that can be incorporated in India on a national scale are-

- Placing high taxes on tobacco and adjusting for inflation to prevent tobacco products from becoming cheaper and affordable to adolescents over time, which can occur if inflation is not considered.⁴⁸
- Earmarking the tax collected from tobacco sales for funding health promotion and tobacco control programs in India specifically targeting adolescents, as proven effective in Canada, Finland and California and Massachusetts states of USA.^{28,48}
- A comprehensive ban over a partial ban on smoking in public places, without permitting designated areas for smoking, to promote de-normalizing of smoking as a social norm and creating a sociocultural environment that influences adolescents to not experiment or initiate tobacco usage, as proven effective in Canada, Australia, Germany and Switzerland.²⁸
- A comprehensive ban on all forms of tobacco advertising, promotion and sponsorship events by tobacco companies, to minimize opportunities for tobacco companies to discover loopholes to exploit in legislation for promoting their sales to adolescents.

- Strong graphical advertisements on negative effects of smoking that can evoke emotional responses among current and never users of tobacco, and that are culturally adapted to individual country settings to reduce usage and initiation rates among adolescents, as proven in a study conducted in ten low and middle income countries- India, Bangladesh, Vietnam, China, Egypt, Indonesia, Mexico, Philippines, Russia and Turkey.⁴⁹
- In addition, to presenting the negative effects of smoking, mass media programmes that tend to “dissociate positive meanings and lifestyle with tobacco use and instead associate tobacco free life with a positive lifestyle of health and well-being” have proven quite effective in a study conducted in Northern India among 10-25 year olds, wherein 91.1 % reported greater recall, awareness and acceptance to reduce tobacco consumption when exposed to advertisements projecting positive messages.⁵⁰
- Media and education campaigns need to be re-run and re-evaluated timely to assess their efficiency and effectiveness in being successful in changing the attitudes and perceptions of adolescents and adults towards tobacco consumption.³⁸ Celebrities and local community leaders advocating against tobacco and considered as role models by adolescents can be instrumental in encouraging adolescents to not use tobacco.²⁶
- Schools should include tobacco control and prevention activities as a part of their curriculum, with specific attention paid to developing self-efficacy and refusal skills of the adolescents to say “No to Tobacco”, thus reducing initiation and experimentation among adolescents. Also, schools and universities can provide tobacco counselling by health professionals and counsellors to students who consume tobacco.

- Education in tobacco control and tobacco cessation advocacy can be provided to students in health professional training institutions, through enforcing “tobacco control and prevention” as a subject in health professional curriculum, seminars, workshops, meetings and as professional credit courses to train and develop future health professionals as tobacco change agents of the country.²⁸
- Additionally, creation of a social environment that supports non-tobacco usage is essential for adolescents to not experiment and initiate. Elders in the community, teachers, family members, religious preachers, and law enforcement officials can be utilized as social role models advocating against tobacco.²⁶

Local community leaders and religious preachers can be instrumental in encouraging local shopkeepers to sell healthier commodities to adolescents and youth, rather than supplying and providing tobacco.²⁶ Also, parents should be discouraged from using tobacco in the presence of their children and sending their children to local shops for purchasing tobacco products for them, as such a behaviour sets an incorrect example and positions a wrong message to adolescents of tobacco being socially acceptable in the family and community.²⁶

Conclusion: -

Tobacco consumption among parents and elders have demonstrated being a strong influence for adolescents to initiate use in twenty-six states in India, thus advocating the need to de-normalize tobacco as a socially acceptable norm, particularly for smokeless forms.¹¹ Although prevalence rates amongst adolescents are dropping, yet measures to continue reducing prevalence must be undertaken and evaluated repeatedly. To ensure that tobacco products become less desirable and acceptable by adolescents, it is essential to create a social and legal environment that influences adolescents to adopt a positive behavioural change towards tobacco in a sociocultural setting that discourages

tobacco as a socially desirable norm. National tobacco control programmes must be restructured to reach population subgroups with high rates of tobacco use such as adolescents.²⁸ Increased efforts need to be targeted particularly towards high priority states such as the north-eastern states with high prevalence of tobacco consumption and in areas wherein compliance to legal provisions under the COTPA Act are low. A well designed public education campaign must integrate the following- community and school programmes; strong enforcement of laws passed on taxation, smoking in public places, restriction of sale to and by minors, and comprehensive advertisement promotion and sponsorship bans on all tobacco products without exemptions; media messages counteracting the tobacco industry's tactics; and cessation centres with support both financially and socially for encouraging tobacco users to quit, to successfully help in solving the menace of increasing preventable diseases from tobacco consumption.⁵

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Appendices:

Appendix 1: Components of National Tobacco Control Programme ⁵

National level-

- Public awareness/mass media campaigns for awareness building and behaviour change.

- Establishment of tobacco product testing laboratories, to build regulatory capacity, as mandated under COTPA, 2003.
- Mainstreaming the program components as part of the health care delivery mechanism under the National Rural Health Mission framework.
- Mainstream Research and Training on alternate crops and livelihoods in collaboration with other nodal Ministries.
- Monitoring and Evaluation including surveillance e.g. Global Adult Tobacco Survey (GATS) India.

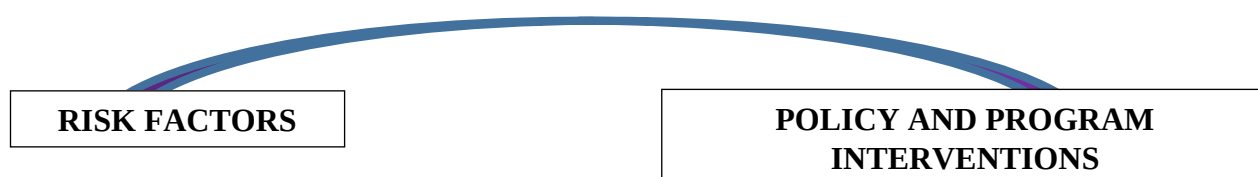
State level-

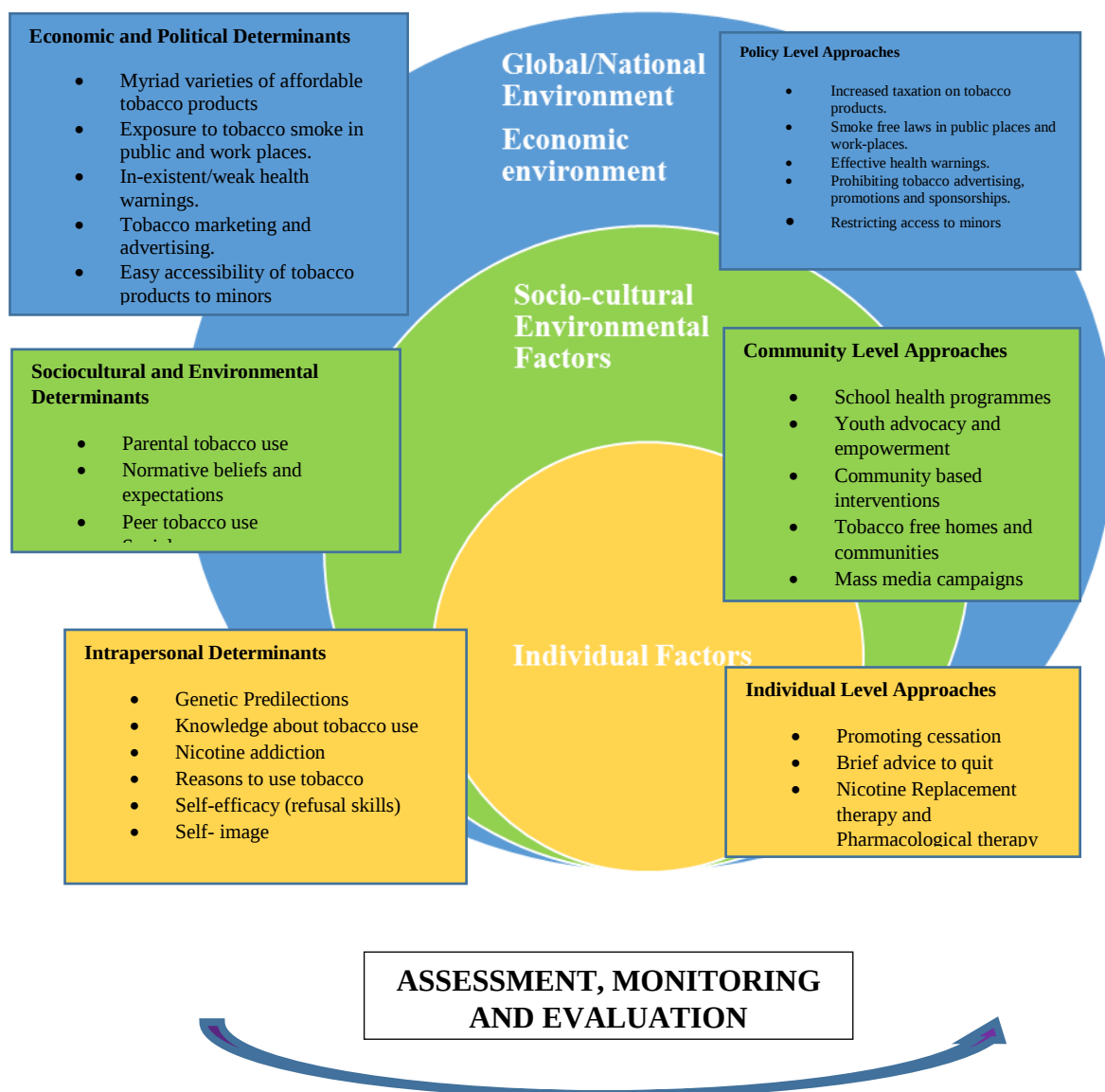
- Tobacco control cells with dedicated manpower for effective implementation and monitoring of anti-tobacco laws and initiatives.

District Level-

- Training of health and social workers, SHGs, NGOs, school teachers etc.
- Local IEC activities.
- Setting up tobacco cessation facilities.
- School Programme.
- Monitoring tobacco control laws.

Appendix 2: IMPACT Framework (Intervention Model for Protecting Adolescents and Children against Tobacco ¹⁶





Source: Arora, M., Mathur, M. R., & Singh, N. (2012). A framework to prevent and control tobacco among adolescents and children: Introducing the IMPACT model. *Indian Journal of Pediatrics*,

Appendix 3: Main Provisions of Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and commerce, Production, Supply and Distribution) Act (COTPA), 2003 ¹⁹

Section 4: Ban on smoking in public places which includes all public and private offices, all workplaces, shopping malls, cinema theatres, court buildings, public conveyances, hotels, restaurants including refreshment rooms, coffee houses/ homes,

canteens, banquet halls, discotheques, pubs, bars, clubs, auditoriums including open auditoriums, hospital buildings, railway stations and railway waiting rooms, amusement centres, libraries, airport lounges, bus stops, etc.

- Prohibition of smoking in public places (from 1 May 2004 and Smoke-Free Rules with effect from 2 October 2008).
- Fine of up to Rs 200 for smoking in public places.

Section 5: Ban on all forms of direct and indirect advertising, promotion and sponsorship of tobacco products.

- Prohibition of advertisement of tobacco products (with effect from 1 May 2004).
- Fine of up to Rs 1000 or imprisonment or both for first offence and higher fine for repeat offence.

Section 6: Ban on sale of tobacco products to minors.

- Ban on sale of tobacco products to minors (1 May, 2004).
- The provision for a ban on the sale of tobacco products within a radius of 100 yards of educational institutions (1 December 2004 and display of board by Educational Institutions Rules in January 2009).
- Fine of up to Rs 200.

Section 7: Depiction of specified health warnings on tobacco product packages.

- The Packaging and Labelling Rules were implemented from 31 May 2009.
- Fine of up to Rs 5000 or imprisonment or both for first offence and higher fine for repeat offence.

Section 11: Mandatory depiction of tar and nicotine contents along with maximum permissible limits on tobacco packs (the rules in respect of these provisions of the Act have not yet been notified).

Appendix 4: Guidelines for Tobacco- Free Schools/Educational Institutions ¹⁹

- Display of “Tobacco-free school” or “Tobacco-free institution” board at a prominent place on the boundary wall outside the main entrance.

- No sale of tobacco products inside the premises and within a radius of 100 yards from schools/educational institutions, and mandatory signage in this regard shall be displayed prominently near the main gate and on the boundary wall of the school/institute.
- No smoking or chewing of tobacco inside the premises of the institution by students/teachers/other staff members/visitors.
- Display of signboards “No Smoking Area–Smoking here is an offence” of 60 X 30 cm size inside the institution (as mandated by law).
- Posters with information about the harmful effects of tobacco shall be displayed at prominent places in the schools/ institutions. Students shall be encouraged to make their own posters on tobacco control themes.
- A copy of the Cigarettes and Other Tobacco Products Act (COTPA) 2003 shall be available with the principal/head of school/institution (may be downloaded from the website of the Ministry of Health & Family Welfare: www.mohfw.nic.in).
- A “Tobacco Control Committee” shall be in place. It may be chaired by the school head/principal, with members comprising a science teacher or any other teachers, school counsellor (if available), at least two NSS/ NCC/Scout students, at least two parent representatives, area MLA, area SHO, municipal councillor, member of PRIs, or any other member. The committee shall monitor the tobacco control initiatives of the school/ institute. The committee shall meet quarterly and report to the district administration.
- Integrate tobacco control activities with the ongoing School Health Programme of the state.
- Promote writing of anti-tobacco slogans on school/institute stationery.
- The principal/head of school/institute shall recognize tobacco control initiatives by students/teachers/other staff and certificates of appreciation or awards may be given.
- State Nodal Officer for Tobacco Control in the State Health Directorate may be consulted for technical or any other inputs.