An exploratory study to assess the knowledge and attitude regarding tobacco consumption and its hazards among male adults at selected village of moga, Punjab

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Abstract:
Background: Tobacco consumption remains an important preventable cause of disease, disability and premature death. Tobacco may be consumed through smoked products such as cigarettes, bidis and hookah or through smokeless products such as khaini, gutkha, zarda and tobacco-containing preparations. In India, smokeless tobacco is particularly important, and rural men constitute an important population for tobacco prevention and cessation work. The Global Adult Tobacco Survey India 2016–2017 estimated that 28.6% of adults aged 15 years and above used tobacco, while the national data showed substantial use among men. WHO describes tobacco as a major risk factor for cardiovascular disease, respiratory disease and multiple cancers and emphasises that all forms of tobacco are harmful.
Aim: The proposed exploratory study aims to assess the level of knowledge and attitude regarding tobacco consumption and its hazards among male adults in a selected village of Moga, Punjab, and to examine the relationship of knowledge and attitude with selected socio-demographic variables.
Methods: A community-based exploratory, cross-sectional design is appropriate for the study. Adult men residing in the selected village would be recruited according to predefined eligibility criteria. Data collection may use a structured socio-demographic proforma, a knowledge questionnaire covering tobacco products, dependence, health hazards, second-hand smoke, oral and respiratory effects, cardiovascular effects, cessation and tobacco-control measures, and an attitude scale covering perceived risk, social acceptability, readiness to quit and willingness to support tobacco-free environments. Data may be summarised by frequency, percentage, mean and standard deviation, with appropriate tests of association such as chi-square or Fisher's exact test. If scale scores are approximately continuous and assumptions are met, correlation or regression methods may also be used.
Expected contribution: The study is intended to identify areas in which rural adult men may need clearer information, stronger cessation support or community-level interventions. Indian evidence indicates that awareness of tobacco hazards is associated with tobacco-use patterns, while behavioural cessation interventions can improve quitting outcomes when support is sustained. Findings from a village-level assessment can therefore help nurses, community health workers and primary-care teams tailor health education to local beliefs and practices.

Keywords:
tobacco consumption; tobacco hazards; knowledge; attitude; male adults; rural health; Moga; Punjab; tobacco cessation; community health nursing.

1. Introduction:

Tobacco consumption is a major public-health problem because it combines widespread exposure with dependence, long-term disease risk and preventable premature mortality. Tobacco products deliver nicotine, a highly addictive substance, together with many toxic and carcinogenic substances. Tobacco smoke contains thousands of chemicals, and both smoking and smokeless tobacco can damage health. WHO states that tobacco use contributes to cancer, cardiovascular disease, stroke, chronic respiratory disease, impaired immunity and other conditions, while exposure to second-hand smoke also causes serious disease (WHO, et al., 2026).

In India, tobacco use has a distinctive pattern because people use both smoked and smokeless products. Cigarettes and bidis are widely recognised forms of smoked tobacco, whereas khaini, gutkha, zarda, tobacco-containing betel quid and other chewing preparations are important forms of smokeless tobacco. The Global Adult Tobacco Survey India 2016–2017 reported an overall current tobacco-use prevalence of 28.6% among adults aged 15 years and above, with smokeless tobacco accounting for a substantial part of total use (Ministry of Health and Family Welfare, et al., 2018). The same survey showed that tobacco use was particularly common among men, demonstrating the importance of male-focused community assessment.

Tobacco consumption is not only an individual health behaviour. It is influenced by family practices, peer groups, occupation, income, and education, availability of tobacco products, social norms, stress, perceived benefits and perceptions of risk. Research using GATS data has found that tobacco use is more common among certain groups of men, people with lower educational attainment and rural populations, while limited awareness of tobacco-related hazards is associated with greater tobacco use (Mishra et al., 2015). These findings support the value of assessing knowledge and attitude in a specific rural population rather than assuming that national averages fully describe a particular village.

Moga district is part of Punjab, a state in which social, occupational and cultural conditions may shape health behaviours. A qualitative study from a district of Punjab reported that tobacco use among local and migrant workers was influenced by social and cultural determinants, with differences associated with age, gender, religion and place of residence (Sarkar et al., 2022). Such evidence indicates that tobacco prevention cannot depend only on general warnings. Community programmes need to understand what adult men know, what they believe about tobacco, how they interpret social acceptability and whether they perceive quitting as possible.

Knowledge refers to the information and understanding a person possesses about a subject. In this study, knowledge includes awareness of different tobacco products, nicotine dependence, immediate and long-term effects, oral and dental hazards, respiratory and cardiovascular effects, cancer risks, effects on family members, second-hand smoke, financial consequences, warning labels, cessation services and the benefits of stopping tobacco. Knowledge does not automatically produce behaviour change, but it is an important component of informed decision-making and health promotion.

Attitude refers to a person's relatively stable tendency to think, feel and respond positively or negatively towards a subject. In relation to tobacco, attitude may include perceived acceptability of tobacco use, beliefs about stress relief, perceived social approval, perceived personal susceptibility to disease, confidence in quitting, willingness to encourage others to stop and support for smoke-free environments. A person may possess accurate knowledge while maintaining a favourable attitude towards tobacco, or may have a negative attitude but continue using tobacco because of dependence and social circumstances. Therefore, both constructs need to be assessed separately.

The distinction between knowledge and attitude is particularly relevant in rural health. Health messages may be available through television, mobile phones, schools, health workers and tobacco-product warnings, yet people may still interpret tobacco use as a routine part of social interaction. Studies of tobacco awareness in India have demonstrated that although many adults recognise that tobacco is harmful, knowledge of specific consequences may be incomplete (Kaur et al., 2021). This gap between broad awareness and detailed understanding provides a strong rationale for a structured assessment.

Male adults are an important target group because tobacco use in India has historically been substantially higher among men than women. GATS-2 reported current smoking and smokeless-tobacco use among men at considerably higher levels than among women (Ministry of Health and Family Welfare, et al., 2018). Adult men may also influence household expenditure, family norms and the behaviour of younger family members. Interventions aimed at men can therefore have benefits that extend beyond the individual user, particularly when cessation and smoke-free-home practices are included.

The health consequences of tobacco are broad. Smoking is strongly associated with lung disease and cancer, while tobacco exposure contributes to cardiovascular disease and stroke. Smokeless tobacco can produce oral lesions, periodontal disease and oral and other cancers. A systematic review of smokeless tobacco described substantial health risks, although the magnitude of risk differs by product, exposure and study design (Critchley and Unal, et al., 2003). Evidence concerning oral cancer also shows a consistent association with tobacco smoking, with risk varying according to intensity, duration and population (Boffetta et al., 2008).

Second-hand smoke creates an additional community concern. Tobacco use by one adult can expose children, spouses, older adults and other household members to tobacco smoke. WHO emphasises that there is no safe level of exposure to second-hand smoke and that it contributes to cardiovascular and respiratory disease (WHO, et al., 2026). A village-level study can therefore include questions about smoking inside the home, exposure around children and willingness to maintain tobacco-free household environments.

Nicotine dependence makes tobacco cessation more complex than simply deciding to stop. Dependence can involve cravings, withdrawal symptoms, habitual cues, social reinforcement and repeated relapse. For this reason, health education should be linked with accessible cessation support. Indian tobacco-dependence treatment guidance recommends that healthcare providers offer brief cessation advice and that dedicated services be strengthened at different levels of the health system (Ministry of Health and Family Welfare, et al., 2011). Nurses and community health workers can contribute by identifying users, providing brief counselling, encouraging quit attempts and linking individuals with appropriate services.

Behavioural interventions have demonstrated value in Indian settings. A systematic review and meta-analysis of behavioural tobacco-cessation studies in India included 16 studies and more than 9,600 participants and reported beneficial effects of behavioural interventions on cessation outcomes (Pahwa et al., 2023). A network meta-analysis also reported beneficial effects for approaches such as individual counselling, group counselling and e-health interventions, although study quality and heterogeneity require careful interpretation (Sajid et al., 2023). These findings suggest that knowledge and attitude assessment should ideally be linked to practical cessation pathways.

The present exploratory study is therefore designed around a simple public-health question: what do male adults in a selected village of Moga know about tobacco, and how do they feel about tobacco use, its hazards and quitting? By answering this question systematically, the investigator can identify educational gaps and understand whether demographic characteristics are associated with knowledge and attitude. The findings can support community-level planning without assuming that national statistics automatically describe the selected village.

2. Need for the study:

Tobacco remains preventable, yet its effects can persist for decades after exposure begins. India has a large population of tobacco users and a substantial burden from tobacco-attributable disease. WHO India reports that approximately 267 million adults aged 15 years and above were tobacco users according to GATS India 2016–2017, and tobacco was associated with a major economic burden in the country (WHO India, et al., 2026). These figures justify continued local assessment even when national prevalence appears to be changing.

A village-level study is useful because health behaviour is shaped by context. National surveys provide representative estimates, but they cannot identify the specific beliefs of residents in one selected village. A community may have particular patterns of bidi use, chewing tobacco, social sharing of tobacco products, occupational exposure, or local beliefs about tobacco and digestion, stress or stamina. Assessing knowledge and attitude allows the investigator to identify these areas directly.

The need for knowledge assessment is supported by evidence that awareness is uneven. In a secondary analysis of GATS data, comprehensive awareness of tobacco's adverse effects was not universal among smokers, smokeless-tobacco users or non-users (Kaur et al., 2021). This is important because broad statements such as 'tobacco is harmful' may coexist with limited understanding of specific risks such as oral cancer, cardiovascular disease, chronic respiratory disease, dependence and harm from second-hand smoke.

Attitude is equally important because health information alone does not guarantee behaviour change. Some tobacco users may acknowledge health risks but believe that personal risk is low, that quitting is unnecessary unless symptoms develop, or that tobacco helps manage stress. Others may want to quit but lack confidence or support. A structured attitude scale can identify these beliefs and can help nurses design messages that address perceived barriers rather than merely repeating general warnings.

Rural populations also deserve focused attention. Analysis of GATS data has shown higher tobacco use in rural settings and among particular socioeconomic groups (Mishra et al., 2015). Rural communities may have different access to healthcare and cessation services compared with urban settings. Community-based nurses and health workers are therefore strategically positioned to provide early identification and brief interventions.

The selected population of male adults is appropriate because men have a higher tobacco-use burden than women in India. The GATS evidence demonstrates large gender differences in smoking and smokeless-tobacco use (Ministry of Health and Family Welfare, et al., 2018). Adult men may also influence household norms and younger generations. Assessing their knowledge and attitude can therefore inform both individual and family-oriented health promotion.

Finally, the study can provide a baseline for future intervention. If a village demonstrates knowledge gaps, an educational programme can be planned and evaluated later. If knowledge is adequate but attitudes remain permissive, interventions can focus on risk perception, social norms and cessation confidence. If both knowledge and attitude are favourable but tobacco use remains high, dependence, access, stress, affordability and social factors may need greater attention. This makes the exploratory approach practical and potentially useful for community health nursing.

3. Problem statement:

"An exploratory study to assess the knowledge and attitude regarding tobacco consumption and its hazards among male adults at selected village of Moga, Punjab."

Aim of the study:

The aim of the study is to assess the knowledge and attitude regarding tobacco consumption and its hazards among male adults residing in a selected village of Moga, Punjab, and to identify selected socio-demographic factors associated with these outcomes.

Objectives of the study:

1. To assess the level of knowledge regarding tobacco consumption and its hazards among male adults in the selected village.
2. To assess the attitude of male adults towards tobacco consumption, its hazards, cessation and tobacco-free living.
3. To describe selected socio-demographic characteristics of the participants.
4. To assess the association between knowledge regarding tobacco consumption and selected socio-demographic variables.
5. To assess the association between attitude towards tobacco consumption and selected socio-demographic variables.
6. To determine the relationship between knowledge scores and attitude scores, where the measurement scale and assumptions permit such analysis.
7. To identify priority areas for community-based tobacco health education and cessation support.

4. Operational definitions:

Exploratory study: A community-based cross-sectional investigation undertaken to explore the knowledge and attitude of male adults regarding tobacco consumption and its hazards without introducing an experimental intervention.

Knowledge: The participant's correct understanding of tobacco products, nicotine dependence, health hazards, second-hand smoke, cessation and prevention, measured using the structured knowledge questionnaire developed for the study.

Attitude: The participant's pattern of agreement or disagreement with statements concerning tobacco use, perceived risk, social acceptability, quitting, cessation support and tobacco-free environments, measured using the study attitude scale.

Tobacco consumption: The use of smoked or smokeless tobacco products, including cigarettes, bidis, hookah tobacco, khaini, gutkha, zarda, tobacco-containing betel quid and other locally used tobacco preparations.

Hazards: Adverse physical, psychological, social and economic consequences associated with tobacco use or exposure, including dependence, cancer, respiratory disease, cardiovascular disease, oral disease, second-hand smoke and financial burden.

Male adult: A male participant meeting the age criterion selected by the investigator, for example 18 years and above, who is a resident of the selected village and satisfies the inclusion criteria.

Selected village: The rural community in Moga district chosen by the investigator as the study setting according to feasibility and administrative permission.

5. Assumptions:

- Adult men in a rural community may have varying levels of knowledge about tobacco and its health effects.
- Attitudes towards tobacco may be influenced by education, occupation, age, family environment and personal tobacco-use history.
- Improved knowledge may be associated with more health-protective attitudes, although knowledge alone does not guarantee cessation.
- Community-based assessment can identify educational priorities relevant to local tobacco-control activities.

6. Delimitations:

- The study is limited to male adults residing in the selected village of Moga district.
- The study is limited to participants who meet the stated inclusion criteria and provide informed consent.
- The study measures knowledge and attitude at one point in time and therefore cannot establish causality.
- Self-reported tobacco use and attitudes may be affected by recall or social-desirability bias.
- The findings should not be generalised to all villages of Moga or Punjab without considering sampling and setting differences.

7. Conceptual framework:

A conceptual framework provides a logical structure for linking participant characteristics, knowledge, attitude and tobacco-related behaviour. A useful framework for this study can combine the Health Belief Model with a simple knowledge–attitude–practice perspective. The Health Belief Model proposes that health behaviour is influenced by perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action and self-efficacy. In the context of tobacco, a participant may know that smoking or chewing tobacco can cause cancer but may continue using it if he believes that cancer is unlikely to happen to him or that quitting will be too difficult.

The knowledge component represents information obtained through education, family experience, health workers, media, warning labels and personal contact with illness. Knowledge can influence perception of susceptibility and severity. Attitude reflects how the participant interprets this information and how acceptable or unacceptable he considers tobacco use. Behavioural intention and actual use are influenced by additional factors such as nicotine dependence, social norms, affordability, availability and stress. Therefore, the framework does not assume a simple linear relationship in which knowledge automatically produces quitting.

For the present study, socio-demographic characteristics such as age, education, occupation, marital status, income, family type and residence duration may act as background factors. Tobacco-related characteristics such as current use, age at initiation, product type, frequency, duration, expenditure and previous quit attempts can provide contextual information. Knowledge and attitude are the principal study outcomes. The framework can therefore be represented as: background characteristics and tobacco-use history → exposure to information and experience → knowledge → perceptions and attitude → intention/readiness to change → potential cessation or prevention behaviour. Environmental and social influences can affect each stage.

8. Review of literature:

The literature was reviewed under broad themes relevant to the proposed study: magnitude and pattern of tobacco use, tobacco-related health hazards, knowledge and awareness, attitudes and cessation behaviour, rural and gender considerations, tobacco control in India, and the role of health professionals.

8.1. Magnitude and pattern of tobacco use in India:

India has one of the world's largest tobacco-use populations. GATS India 2016–2017 estimated that 28.6% of adults aged 15 years and above were current users of tobacco. The survey documented both smoking and smokeless-tobacco use and showed a pronounced male burden (Ministry of Health and Family Welfare, et al., 2018). This is highly relevant to a study focusing on male adults.

National data indicate that smokeless tobacco is especially important in India. The GATS-2 report estimated current smokeless-tobacco use at 21.4% among adults, compared with 10.7% for smoking tobacco, illustrating why community assessment should not focus only on cigarettes and bidis (Ministry of Health and Family Welfare, et al., 2018). A questionnaire that omits chewing products could therefore underestimate exposure and fail to capture locally relevant hazards.

A national analysis of tobacco-use determinants found that tobacco use was associated with demographic and socioeconomic factors and that lack of awareness of selected health hazards was related to tobacco consumption (Mishra et al., 2015). The authors highlighted differences by age, education, poverty and rural residence. These findings support including socio-demographic variables in the present study rather than assessing knowledge and attitude in isolation.

More recent analyses of GATS data have shown that tobacco use is particularly common among older men and those living in rural areas, with educational attainment and employment status also associated with use patterns (Singh et al., 2023). Such evidence supports the selection of adult men in a rural setting as a population in which detailed assessment can provide useful information.

8.2. Tobacco-related health hazards:

WHO states that tobacco damages nearly every organ of the body and is a major risk factor for more than 20 types or subtypes of cancer, cardiovascular disease and respiratory disease (WHO, et al., 2026). For a community study, this means the knowledge questionnaire should cover multiple organ systems rather than only lung cancer.

Smoking is a major cause of chronic respiratory disease and contributes to chronic obstructive pulmonary disease, respiratory infections and lung cancer. Cardiovascular risks include coronary heart disease and stroke. The health message should also include the fact that disease can develop before a person notices obvious symptoms. The absence of symptoms should not be interpreted as absence of harm.

Oral health is particularly important in communities where smokeless tobacco is used. Tobacco-containing products can contribute to oral mucosal changes, periodontal disease and oral cancer. A meta-analysis of smoking and oral cancer found a positive association between smoking and oral cancer risk (Boffetta et al., 2008). The evidence supports asking participants whether they know that tobacco can affect the mouth, gums, tongue and throat.

Smokeless tobacco is not a safe alternative to smoking. A systematic review reported associations between smokeless tobacco and several adverse outcomes, although the strength and certainty of evidence varied across outcomes and products (Critchley and Unal, et al., 2003). Therefore, health education should avoid presenting smokeless tobacco as harmless merely because it does not produce smoke.

Second-hand smoke is an important household hazard. WHO reports that exposure to tobacco smoke causes serious cardiovascular and respiratory diseases and that there is no safe level of exposure (WHO, et al., 2026). Questions about smoking inside the home, near children, or in shared spaces can therefore provide useful information for family-oriented health promotion.

8.3. Knowledge and awareness:

Knowledge is an important but incomplete determinant of tobacco behaviour. In a large Indian secondary-data analysis, awareness of adverse effects varied between smokers, smokeless-tobacco users and non-users, showing that knowledge gaps remain even in a population exposed to widespread health warnings (Kaur et al., 2021).

(McKay et al., 2015) reviewed tobacco-control strategies in India and concluded that studies showed widespread understanding of tobacco-related harm but less knowledge of specific consequences. The review also identified the importance of education and cessation assistance. This finding supports a questionnaire that distinguishes general awareness from specific knowledge.

Knowledge can be influenced by education, exposure to health information, media, healthcare contact and personal experience. Participants who have seen a family member develop cancer or chronic lung disease may report greater perceived risk, but personal experience does not necessarily translate into accurate understanding. A structured questionnaire allows these domains to be measured systematically.

Health warnings on tobacco products are one source of knowledge. The GATS framework includes questions about noticing health warnings and thinking about quitting. In the present study, the investigator may ask participants whether they have seen warnings and whether the warnings influenced their understanding or intention. Such questions can connect knowledge assessment with tobacco-control communication.

8.4. Attitude towards tobacco and cessation:

Attitude involves beliefs and feelings about tobacco and its use. A person may agree that tobacco is harmful but still consider occasional use socially acceptable. Another participant may believe that quitting is desirable but not feel confident about stopping. Thus, attitude measurement should include perceived risk, perceived benefits of quitting, perceived barriers, social acceptability and self-efficacy.

A study among male tobacco users attending a government dental college in India assessed knowledge, attitudes, practices and motivation to quit and examined differences by age and educational status (Jha et al., 2020). Such research demonstrates the practical value of assessing not only knowledge but also readiness and confidence related to quitting.

Tobacco dependence may weaken the relationship between knowledge and behaviour. A user can possess accurate information and still experience cravings, withdrawal symptoms and repeated relapse. The Indian tobacco-dependence treatment guidelines therefore emphasise counselling and support rather than relying on information alone (Ministry of Health and Family Welfare, rt al., 2011).

Attitude questions should be neutrally worded to avoid judging participants. Examples include whether the participant believes tobacco is harmful, whether tobacco use is socially acceptable, whether quitting improves health, whether a person can quit with support, whether smoking should be avoided inside the home and whether he would encourage a family member to stop. Balanced wording improves the quality of self-report.

8.5. Rural and socio-cultural determinants in Punjab:

Tobacco use is socially embedded. In Punjab, qualitative research has described social and cultural influences on tobacco consumption among local and migrant workers, demonstrating that age, gender, religion and residence may intersect with tobacco behaviour (Sarkar et al., 2022). A community assessment in Moga should therefore avoid interpreting tobacco use only as an individual choice.

Rural settings can provide both protective and risk factors. Strong family networks and community health workers may facilitate cessation, while social gatherings, occupational routines, peer use and easy local

availability may reinforce tobacco use. The study can ask about common situations in which tobacco is consumed without assuming that every participant has the same experience.

Socioeconomic circumstances may also influence tobacco consumption. Tobacco can be perceived as affordable or useful for short-term stress relief, while long-term costs may be underestimated. Including questions about monthly expenditure can help participants recognise the financial dimension of tobacco use, although the study should treat such questions sensitively and confidentially.

Education is another important variable. Research across India has identified an education differential in tobacco use and exposure to tobacco-control information (Singh et al., 2018). The present study can therefore examine whether knowledge and attitude scores differ across educational groups, while recognising that education is only one determinant among many.

8.6. Tobacco control and cessation services in India:

India has implemented a national tobacco-control programme and legislation addressing tobacco advertising, promotion, smoking in public places and other aspects of tobacco control. The National Tobacco Control Programme provides manuals, training resources and tobacco-cessation guidance for health workers and healthcare professionals (National Tobacco Control Programme, et al., 2026).

The Tobacco Dependence Treatment Guidelines recommend integration of brief tobacco-cessation counselling into healthcare. Nurses, pharmacists, health workers and other trained providers can contribute to counselling and referral (Ministry of Health and Family Welfare, et al., 2011). This is relevant to a community-based nursing study because knowledge and attitude assessment can be connected to a realistic service pathway.

Behavioural cessation interventions have demonstrated beneficial effects in Indian studies. Pahwa et al., 2023) reported favourable pooled effects across behavioural intervention studies and emphasised the importance of repeated support. A network meta-analysis also found benefits for individual and group counselling and e-health approaches, although methodological quality varied (Sajid et al., 2023).

The present study should therefore not end with identification of knowledge gaps. Participants who request help should be offered appropriate information about available cessation services, including the national tobacco quitline, and referred according to local healthcare arrangements. This approach respects participant autonomy and gives the study an immediate health-promotion component.

8.7. Synthesis of the literature:

The reviewed literature establishes several points relevant to the proposed study. First, tobacco use remains common in India and is particularly important among men and rural populations. Second, smokeless tobacco must receive substantial attention because it contributes a large share of tobacco use in India. Third, awareness is not uniformly comprehensive; people may know that tobacco is harmful while lacking detailed knowledge of specific diseases. Fourth, attitudes, perceived risk, social norms and confidence in quitting influence behaviour alongside knowledge. Fifth, community and healthcare interventions can support cessation when they are accessible and sustained. These findings justify an exploratory study that measures both knowledge and attitude among male adults in a defined rural setting.

9. Research methodology:

Research approach

A quantitative, non-experimental approach is suitable because the study aims to measure knowledge and attitude using structured instruments. A cross-sectional approach allows data to be collected during a defined period without manipulating the participants' exposure or behaviour. The exploratory nature of the study is reflected in the intention to describe patterns and identify associations rather than establish cause-and-effect relationships.

Research design

The recommended design is a community-based exploratory cross-sectional survey. The design provides a practical method for assessing a relatively large number of adult men in a village within limited time and resources. Because knowledge and attitude are measured at one time, the study can identify associations but cannot determine whether a particular factor caused a particular attitude or tobacco-use pattern.

Setting of the study

The study setting will be a selected village in Moga district, Punjab. The exact village should be named in the final institutional submission. The investigator should describe the village population, approximate number of households, available health facilities, sub-centre or health and wellness centre, schools, common occupations, transportation, local tobacco availability and other characteristics that are relevant to community health. Administrative permission should be obtained before data collection.

Population

The target population consists of adult men living in the selected village. The accessible population comprises adult men who are available during the data-collection period and who meet the eligibility criteria. The study may include both tobacco users and non-users because comparison of knowledge and attitude across these groups can provide useful information. Including only current users would answer a different question and would not provide a complete picture of community attitudes.

Eligibility criteria

Inclusion criteria

- Male adults meeting the minimum age criterion specified in the approved protocol, preferably 18 years or above.
- Residents of the selected village for the period defined by the investigator.
- Participants who can understand the language used for the interview or questionnaire.
- Participants who are willing to participate and provide informed consent.

Exclusion criteria

- Individuals who are seriously ill or unable to participate at the time of data collection.
- Individuals who are unable to provide informed consent.
- Temporary visitors who do not meet the residency requirement.
- Participants who have already completed the same survey during the study period.

Sample size

The final sample size should be calculated before data collection using an appropriate prevalence estimate, desired precision, confidence level and design assumptions. If a previous estimate is unavailable, a conservative prevalence of 50% may be used for a simple prevalence calculation, followed by an allowance for non-response and any design effect if cluster sampling is used. The investigator should report the exact formula, assumed prevalence, margin of error, confidence level, estimated sample size and final recruited number in the final dissertation. It is important not to invent a sample size simply to make the study appear complete.

For example, the standard single-proportion formula is $n = Z^2pq/d^2$, where n is the required sample size, Z is the standard normal value for the chosen confidence level, p is the estimated prevalence, q is $1-p$, and d is the desired absolute precision. If a finite population correction or cluster sampling method is appropriate, the calculation should be adjusted accordingly. A non-response allowance should be stated explicitly.

Sampling technique

A probability sampling technique is preferable when a sampling frame is available. Systematic random sampling of households followed by selection of one eligible male per household can reduce clustering and make participant selection transparent. Alternatively, simple random sampling can be used if an accurate list of eligible adult men is available. If feasibility requires convenience or purposive recruitment, this limitation must be clearly acknowledged because it affects generalisability.

Table 1: *Variables*

Variable category	Examples
Independent/background variables	Age, education, occupation, marital status, family type, income, religion if ethically justified, duration of residence.
Tobacco-related variables	Current use, past use, product type, age at initiation, frequency, duration, expenditure, previous quit attempts, exposure to tobacco at home/work.
Primary outcome 1	Knowledge score regarding tobacco consumption and hazards.
Primary outcome 2	Attitude score towards tobacco use, hazards, cessation and tobacco-free living.
Potential contextual variables	Exposure to health messages, health-worker advice, awareness of cessation services, family history of tobacco-related illness.

Development of the data-collection tool

The data-collection instrument should be developed from the study objectives, literature and established tobacco-surveillance concepts. Items should be written in simple language and translated into the language commonly understood by participants, such as Punjabi, if required. Translation and back-translation should be considered to preserve meaning. The tool should avoid technical terms unless they are explained in plain language.

Part A: Socio-demographic proforma

The proforma may include age, marital status, education, occupation, monthly household income or socioeconomic category, family type, number of household members and duration of residence. Questions should be limited to variables that have a clear relationship to the study objectives. Sensitive information should not be collected unnecessarily.

Part B: Tobacco-use profile

This section may ask whether the participant currently uses tobacco, formerly used tobacco, or has never used it; the type of product; age at initiation; frequency; duration; quantity; expenditure; use in the home; use around children; previous quit attempts; and current intention to quit. The wording should allow for multiple product use because dual use is possible.

Part C: Knowledge questionnaire

The knowledge questionnaire can contain approximately 25–35 items, depending on the final validation. Topics should include nicotine dependence; smoking and smokeless tobacco; cancer; oral disease; respiratory disease; cardiovascular disease; stroke; reproductive effects where relevant; second-hand smoke; addiction; financial effects; warning labels; benefits of quitting; relapse; and availability of cessation support. Items can be multiple choice, true/false or yes/no. Correct answers should be scored consistently.

Part D: Attitude scale

A Likert-type attitude scale may contain approximately 20–25 statements with response options such as strongly agree, agree, undecided, disagree and strongly disagree. Items should include both favourable and unfavourable statements to reduce response-set bias. Examples include perceived harmfulness, social acceptability, confidence in quitting, willingness to receive counselling, willingness to maintain a tobacco-free home and willingness to discourage tobacco use among younger family members.

Validity

Content validity should be established by asking a panel of experts in community health nursing, mental health or behavioural science where appropriate, public health, tobacco control and research methodology to review the tool. Experts should assess relevance, clarity, simplicity, cultural appropriateness and coverage of the objectives. Content validity indices can be calculated if required by the academic institution. Items with poor relevance or ambiguity should be revised before pilot testing.

Reliability

Reliability should be assessed using an appropriate method. For a knowledge questionnaire scored as right or wrong, internal consistency measures may be considered alongside test–retest reliability. For a Likert attitude scale, Cronbach's alpha is commonly used to assess internal consistency, while test–retest reliability can assess stability over time. The final report should provide the actual coefficient obtained rather than a presumed value.

Pilot study

A pilot study may be conducted on a small group similar to the target population but outside the final sample, subject to institutional approval. The pilot should examine comprehension, interview duration, cultural acceptability, order of questions, scoring and logistical feasibility. Participants in the pilot should not automatically be included in the final sample unless the approved protocol permits this and the instrument remains unchanged.

Data-collection procedure

After ethical and administrative approval, the investigator should approach the selected households or participants according to the sampling plan. The purpose of the study should be explained in simple language. Written or appropriately documented informed consent should be obtained. Interviews should be conducted in a private or reasonably confidential setting to reduce embarrassment and social-desirability bias. The investigator should avoid judgemental language, especially when asking about tobacco dependence or previous unsuccessful quit attempts.

The average interview duration should be recorded during pilot testing and stated in the final methodology. At the end of the interview, participants should be thanked. If a participant expresses a desire to stop tobacco use, the investigator should provide brief evidence-based advice and information about available cessation support without pressuring the participant. If the participant reports concerning symptoms, appropriate referral to a healthcare professional should be suggested according to the study protocol.

Ethical considerations

- Approval should be obtained from the appropriate institutional ethics committee or research-approval body before recruitment.
- Administrative permission should be obtained from the relevant village or health authorities where required.
- Informed consent should be obtained before participation.
- Participation should be voluntary, and participants should have the right to refuse or withdraw without penalty.
- Personal identifiers should be minimised and data should be stored securely.
- Results should be reported in aggregate form so that individual participants cannot be identified.
- Participants should not be shamed, blamed or pressured because of tobacco use.
- Information about cessation services should be offered when appropriate, especially to participants who request help.

10. Scoring and interpretation:

A knowledge scoring system should be defined before analysis. For example, one mark can be awarded for each correct answer and zero for an incorrect or 'don't know' response. The total score can then be converted into a percentage. Categories such as inadequate, moderately adequate and adequate knowledge may be defined using predetermined cut-offs, but the final cut-offs should be justified and specified before data analysis.

An attitude scale can be scored using five response categories. Positive and negative items must be scored in opposite directions so that a higher total consistently represents the intended construct. Before analysis, the investigator should verify that reverse-scored items have been coded correctly. It is preferable to report the mean or median score along with the distribution rather than relying only on arbitrary categories. The illustrative categories above are examples for planning and should be aligned with the approved institutional research protocol. They should not be presented as universal standards. If a validated instrument with established cut-offs is used, those published criteria should be followed.

11. Plan for data analysis:

Data should be checked for completeness before entry. A coding sheet should be prepared, and categorical variables should be assigned consistent numerical codes. Data may be entered into a statistical package such as SPSS, R, Stata or another approved program. Ten per cent or another predefined proportion of records may be checked against source questionnaires to reduce data-entry errors.

Table 2: *Objective and Suggested analysis*

Objective	**Suggested analysis**
Describe socio-demographic characteristics	Frequency and percentage; mean and standard deviation for approximately continuous variables.
Describe tobacco-use pattern	Frequency, percentage, product distribution, duration and expenditure where measured.
Assess knowledge	Total score, percentage score, mean/SD or median/IQR, and predefined categories.
Assess attitude	Total score, mean/SD or median/IQR, category distribution if justified.
Association with categorical variables	Chi-square test or Fisher's exact test as appropriate.
Relationship between knowledge and attitude	Pearson or Spearman correlation depending on scale properties and assumptions.
Multivariable analysis if sample size permits	Regression modelling to examine independent associations, with cautious interpretation.

The level of statistical significance should be stated before analysis, commonly $p < 0.05$ for exploratory analyses. Confidence intervals should be reported where appropriate. Statistical significance should not be interpreted as proof of causality. Effect sizes and the direction of associations should be considered alongside p-values. Missing data should be described transparently rather than silently excluded without explanation.

12. Proposed results presentation:

Because no field data were provided for this manuscript, the following section provides the recommended structure for presenting actual results rather than invented findings. Once data are collected, the investigator should replace the placeholders with observed values and confidence intervals where appropriate.

Table 3: *Tobacco-use profile*

Tobacco variable	Category	Frequency (n)	Percentage (%)
Current use	Yes	[enter]	[enter]
Current use	No	[enter]	[enter]
Product	Cigarette	[enter]	[enter]
Product	Bidi	[enter]	[enter]
Product	Smokeless tobacco	[enter]	[enter]
Product	Multiple products	[enter]	[enter]
Previous quit attempt	Yes	[enter]	[enter]
Previous quit attempt	No	[enter]	[enter]
Intention to quit	Within 30 days	[enter]	[enter]
Intention to quit	Later/undecided	[enter]	[enter]
Intention to quit	No intention	[enter]	[enter]

Association tables:

For the final study, association tables should report knowledge category against age group, education, occupation, tobacco-use status and other variables selected in the protocol. The corresponding chi-square statistic, degrees of freedom and p-value should be reported. The same approach should be used for attitude. Small cell counts may require Fisher's exact test or category consolidation.

If a significant association is observed, the interpretation should remain descriptive. For example, the final report could state that 'knowledge category was associated with education level in this sample' rather than claiming that education caused better knowledge. Similarly, if no association is found, the report should state that no statistically significant association was detected in the study sample rather than claiming that no relationship exists in the wider population.

13. Discussion framework:

The discussion should begin with a concise statement of the principal findings once the actual data are available. The findings should then be compared with previous Indian and international research. If the study demonstrates high general awareness but lower knowledge of specific hazards, this can be compared with the observation by (McKay et al., 2015) that Indian studies showed widespread general understanding but less knowledge of specific consequences. If the study identifies greater tobacco use among older men or participants with lower education, the findings can be compared with national analyses reporting similar patterns (Mishra et al., 2015; Singh et al., 2023).

If current tobacco use is concentrated among smokeless-tobacco users, the discussion should consider the national importance of smokeless tobacco. GATS-2 found that smokeless tobacco accounted for a larger share of current tobacco use than smoking tobacco in India (Ministry of Health and Family Welfare, et al., 2018). A local pattern of chewing tobacco would therefore be consistent with a broader national pattern, although the exact prevalence in the selected village should be interpreted only from the collected data.

If knowledge scores are relatively high but tobacco use remains common, the discussion should avoid concluding that health education has failed. Knowledge is only one determinant of behaviour. Dependence, social norms, perceived benefits, stress, affordability and access to cessation support may maintain tobacco use. The Health Belief Model can help explain why awareness may not immediately translate into action. Conversely, if lower knowledge is associated with tobacco use, educational interventions may be especially relevant, but the cross-sectional design still prevents causal conclusions.

If attitudes towards quitting are favourable, the study may indicate an opportunity for immediate cessation support. If many participants report a desire to quit but few have received professional assistance, the discussion can highlight the need to strengthen routine brief interventions and referral. Indian evidence indicates that behavioural interventions can improve cessation outcomes when delivered with appropriate support (Pahwa et al., 2023).

If participants report low confidence in quitting, this finding can be discussed in relation to nicotine dependence and previous quit attempts. Repeated attempts are common in tobacco dependence, and relapse should not be

interpreted as lack of motivation. Counselling should support self-efficacy, identify triggers and provide follow-up. The final discussion should distinguish what the study directly measured from explanations suggested by previous research.

The rural Punjab context should be considered. If local social norms or occupational groups appear important, the findings can be compared with qualitative evidence showing socio-cultural determinants of tobacco use in Punjab (Sarkar et al., 2022). However, qualitative themes from another district should not be assumed to apply identically to Moga. Local data should remain the primary basis for interpretation.

14. Health hazards that should be covered in community education:

Nicotine dependence:

Nicotine is the principal addictive substance in tobacco. Repeated exposure can create cravings and withdrawal symptoms when use is reduced or stopped. Dependence can lead to continued use despite awareness of harm. Participants should be taught that difficulty quitting is not evidence that tobacco is harmless; it reflects the addictive nature of nicotine and the need for appropriate support (WHO, et al., 2026).

Respiratory disease

Smoking damages the airways and lungs and contributes to chronic respiratory disease. Persistent cough, breathlessness and reduced exercise tolerance may occur, while serious disease can develop over time. Tobacco cessation is an important component of reducing future risk, and people with respiratory symptoms should be encouraged to seek clinical assessment rather than self-diagnosing.

Cardiovascular disease

Tobacco exposure contributes to cardiovascular risk through several biological mechanisms, including effects on blood vessels, clotting and oxygen delivery. Smoking is associated with coronary heart disease and stroke. Community messages should emphasise that tobacco-related cardiovascular harm can occur even when the person does not consider himself a 'heavy smoker' (WHO, et al., 2026).

Cancer

Tobacco is a major cause of cancer, including lung cancer and cancers of the oral cavity, pharynx and other organs. Both smoking and smokeless tobacco can be harmful. A participant should understand that tobacco-related cancer risk depends on product, exposure pattern and duration, and that no tobacco product can be considered risk-free.

Oral and dental hazards

Chewing tobacco and tobacco-containing preparations can expose oral tissues to carcinogens and can contribute to oral mucosal changes, periodontal disease and tooth loss. Oral health workers and nurses can help identify suspicious symptoms and encourage examination. Any persistent oral ulcer, lump, unexplained bleeding or change in the mouth should be assessed by an appropriate health professional.

Second-hand smoke

People who do not use tobacco may still be harmed by smoke produced by others. Children, pregnant women, older adults and people with chronic disease can be particularly vulnerable. Maintaining smoke-free homes and avoiding smoking around other people are practical protective behaviours (WHO, et al., 2026).

Financial and social consequences

Tobacco expenditure can reduce money available for food, education, healthcare and other household needs. Dependence may also create conflict when family members disagree about tobacco spending. Discussing financial costs can help participants consider consequences beyond disease, although counselling should remain respectful and non-stigmatising.

Effects on family and younger people

Adult tobacco use can normalise tobacco consumption for children and adolescents. Children may also be exposed to second-hand smoke. A tobacco-free household can therefore provide both direct protection and a positive behavioural model. Community health education should encourage adults to avoid using tobacco in front of children and to support young people in remaining tobacco-free.

15. Community health nursing role:

Community health nurses can contribute to tobacco control through health assessment, education, counselling, referral, follow-up and documentation. Their role is particularly relevant in rural settings where community-based health services may provide an accessible point of contact. The National Tobacco Control Programme includes resources for health workers and cessation support, creating a policy basis for integrating tobacco counselling into routine care (National Tobacco Control Programme, et al., 2026).

The first nursing responsibility is identification. During appropriate health encounters, nurses can ask adults whether they use tobacco, what product they use, how often they use it and whether they are interested in quitting. Asking in a routine and non-judgemental manner reduces stigma and makes disclosure more likely.
The second responsibility is brief counselling. The nurse can explain the main health risks, reinforce the benefits of stopping, explore the participant's own reasons for quitting and help identify a practical next step. Counselling should be tailored to readiness. A person not ready to quit may benefit from information and motivational support, while a person ready to quit may require a quit plan and referral.
The third responsibility is referral and follow-up. Some tobacco users need more intensive support, particularly those with strong dependence, repeated unsuccessful quit attempts or significant withdrawal symptoms. Nurses can connect participants with primary-care services or tobacco-cessation resources. Follow-up can reinforce progress and help manage relapse.
The fourth responsibility is family and community education. Tobacco use should be addressed as a household and community issue. Nurses can conduct small-group education sessions, involve community leaders where appropriate, support smoke-free-home messages and collaborate with schools and local organisations for prevention. Education should use locally understandable language and culturally appropriate examples.
The fifth responsibility is documentation and evaluation. Nurses can record tobacco status, counselling provided, referral and follow-up where permitted. In community programmes, monitoring can help determine whether tobacco screening and cessation advice are reaching the intended population.

16. Proposed health-education content:

Meaning of tobacco consumption

Explain smoking and smokeless tobacco in simple language. Clarify that cigarettes, bidis, hookah tobacco and chewing products are all forms of tobacco exposure and that the absence of smoke does not make smokeless tobacco safe.

Nicotine and dependence

Explain that nicotine can cause dependence, cravings and withdrawal. Reassure users that difficulty stopping is common and that professional support is available.

Major health hazards

Use a body-system approach covering mouth and teeth, lungs, heart and blood vessels, brain and stroke risk, cancers and general health.

Second-hand smoke

Encourage smoke-free homes, avoidance of smoking near children and non-users, and respect for smoke-free public spaces.

Benefits of quitting

Explain that stopping tobacco reduces future health risk and prevents continued exposure. Benefits begin after cessation and continue over time, although the exact time course varies by product and disease risk.

Managing cravings

Discuss common triggers such as tea breaks, alcohol use, social gatherings, stress and particular friends or routines. Suggest practical coping strategies such as delaying the urge, changing the routine, deep breathing, drinking water, physical activity and seeking support.

Professional support

Explain that counselling and other evidence-based cessation support can improve the likelihood of quitting. Provide information about available government and local services.

Relapse prevention

Explain that a lapse does not mean permanent failure. Encourage the person to identify the trigger, restart the quit attempt and seek support rather than returning to regular tobacco use.

Community tobacco cessation counselling

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Image 1: ***Tobacco cessation counselling***

17. Expected findings and interpretation framework:

The study should not predetermine whether knowledge or attitude will be high or low. Several patterns are plausible and should be tested using the collected data. One possibility is that participants demonstrate high general awareness but lower knowledge of specific hazards. Another is that knowledge differs substantially by education level. A third possibility is that tobacco users and non-users differ in attitude towards risk and cessation. The role of the exploratory study is to measure these patterns rather than assume them in advance.

If a large proportion of participants report tobacco use, the final report should describe product type and frequency rather than relying only on an overall tobacco-use percentage. This is particularly important in India because smoking and smokeless tobacco have different social patterns and health consequences. If multiple-product use is present, it should be reported separately because dual use may require tailored cessation counselling.

If participants demonstrate favourable attitudes towards quitting but limited access to cessation services, the practical implication would be to strengthen referral and community counselling. If participants demonstrate less favourable attitudes, interventions may need to focus on risk perception, social norms and confidence. If knowledge is adequate but attitudes remain permissive, health education should move beyond information delivery and address beliefs and perceived benefits of tobacco use.

If no statistically significant association is found between knowledge and demographic characteristics, that finding is also meaningful. It may indicate that information gaps are distributed broadly across the community or that the study lacks sufficient sample size to detect smaller differences. Statistical non-significance should not be interpreted as proof that demographic factors have no effect.

Because this is a cross-sectional study, the investigator should not state that poor knowledge causes tobacco use or that favourable attitudes cause quitting. Longitudinal or intervention studies would be needed to examine temporal relationships. The value of the present study is its ability to describe the community at a particular point and identify areas for further action.

18. Limitations of the proposed study:

- Cross-sectional measurement cannot establish temporal or causal relationships.
- Self-reported tobacco use may be affected by recall error or social-desirability bias.
- Knowledge and attitude scores depend on the quality, wording and cultural validity of the measurement tool.
- Results from one selected village may not represent all rural communities in Moga or Punjab.
- Participants who are absent during data collection may differ from those who participate.
- Heavy tobacco users may under-report quantity or frequency.
- Attitude scales may be influenced by participants giving socially acceptable responses.
- Unmeasured factors such as stress, mental health, peer influence, advertising exposure, and availability and dependence severity may affect tobacco behaviour.

19. Implications of the study:

Implications for nursing practice

The findings can help nurses identify the specific knowledge domains requiring emphasis. Rather than delivering identical health messages to every adult, nurses can use the assessment to focus on the products

most commonly used locally, the hazards least understood and the barriers to cessation most frequently reported. Tobacco screening and brief advice can be integrated into community and primary-care contacts.

Implications for nursing education

Nursing students should be prepared to recognise both smoking and smokeless tobacco, understand nicotine dependence, communicate without judgement and provide brief evidence-based cessation advice. The study can be used as a local teaching example for community assessment, health education, behavioural change and epidemiological reasoning.

Implications for nursing administration

Nursing administrators can use community findings to plan outreach activities, training and referral pathways. If the study identifies low awareness of cessation services, administrative action may include strengthening information materials and establishing clearer links between community health workers and cessation services.

Implications for nursing research

Future researchers can use the findings as baseline information for an educational intervention, motivational counselling programme or community tobacco-cessation trial. Longitudinal research could examine whether changes in knowledge and attitude are followed by changes in tobacco use. Qualitative research could further explore social meanings of tobacco in specific rural communities.

Implications for community health policy

At the community level, findings can support tobacco-free village initiatives, health education, smoke-free-home campaigns and improved awareness of cessation resources. National Tobacco Control Programme materials include standard operating procedures and guidance for tobacco-free villages, providing a policy context for community action (National Tobacco Control Programme, et al., 2026).

20. Conclusion:

Tobacco consumption remains an important public-health concern in India, with substantial use among adult men and a major contribution from smokeless tobacco. Tobacco affects multiple organ systems and creates health, social and economic consequences for users and their families. National surveillance demonstrates the scale of the problem, while Indian studies show that knowledge of tobacco hazards is not uniformly comprehensive and that tobacco use is influenced by demographic, socioeconomic and socio-cultural factors (Ministry of Health and Family Welfare, 2018; Mishra et al., 2015; Kaur et al., 2021).

An exploratory assessment of knowledge and attitude among male adults in a selected village of Moga, Punjab, can provide useful local information for community health planning. Measuring knowledge alone would be insufficient because tobacco behaviour is also shaped by attitudes, dependence, social norms, perceived benefits and barriers to quitting. A combined assessment can identify whether the main need is basic information, more specific hazard education, motivational support, cessation counselling or improved access to services.

The proposed study should be conducted using a transparent sampling strategy, a valid and reliable tool, informed consent, confidentiality and appropriate statistical analysis. Most importantly, actual findings should be reported honestly without manufacturing percentages or associations. Where participants express a desire to quit, the research process can also serve as an opportunity to connect them with appropriate cessation support. In this way, the study can contribute not only to academic knowledge but also to practical community tobacco prevention and health promotion.

21. Recommended structure for the final research report after data collection:

1. Chapter/Section 1: Introduction, background, need, problem statement, objectives, operational definitions and assumptions.
2. Chapter/Section 2: Review of literature organised around tobacco prevalence, hazards, knowledge, attitude, rural determinants and cessation.
3. Chapter/Section 3: Methodology including approach, design, setting, population, sample, sampling, variables, tool development, validity, reliability, pilot study, data collection and ethics.
4. Chapter/Section 4: Results with participant characteristics, tobacco-use profile, knowledge scores, attitude scores and associations.
5. Chapter/Section 5: Discussion comparing the observed findings with previous studies.
6. Chapter/Section 6: Summary, conclusion, implications, limitations and recommendations.
7. Appendices: consent form, information sheet, questionnaire, attitude scale, expert-validation form, permission letters and data-analysis plan.

22. Recommendations:

1. Conduct larger community-based studies across multiple villages of Moga district to improve generalisability.
2. Develop culturally and linguistically appropriate tobacco education materials for rural adult men.
3. Strengthen routine tobacco screening and brief cessation advice during primary-care and community-health contacts.
4. Improve awareness of tobacco cessation services and referral pathways.
5. Include smokeless tobacco products prominently in community education because of their substantial contribution to tobacco use in India.
6. Promote tobacco-free homes to reduce second-hand smoke exposure.
7. Conduct intervention studies to determine whether targeted health education changes knowledge, attitude and tobacco-use behaviour.
8. Use qualitative methods to explore social and cultural beliefs about tobacco in different rural communities of Punjab.
9. Repeat community assessments over time to monitor changes in tobacco knowledge, attitudes and use.

23. References:

(1) World Health Organization. Tobacco and nicotine [Internet]. Geneva: WHO; 2026 [cited 2026 Sep 16]. Available from: https://www.who.int/news-room/fact-sheets/detail/tobacco
(2) Ministry of Health and Family Welfare, Government of India. Global Adult Tobacco Survey GATS-2 India 2016-2017. New Delhi: MoHFW; 2018.
(3) World Health Organization. Tobacco: India [Internet]. New Delhi: WHO India; 2026 [cited 2026 Sep 16]. Available from: https://www.who.int/india/health-topics/tobacco
(4) Ministry of Health and Family Welfare, Government of India. Tobacco Dependence Treatment Guidelines. New Delhi: MoHFW; 2011.
(5) National Tobacco Control Programme. Guidelines and manuals [Internet]. New Delhi: Ministry of Health and Family Welfare, Government of India; 2026 [cited 2026 Sep 16]. Available from: https://www.ntcp.mohfw.gov.in/guidelines_manuals
(6) Mishra S, Joseph RA, Gupta PC, Peeters A, Anantha N, et al. Trends in tobacco use in India. Int J Public Health. 2015;60(8):935-945.
(7) Kaur J, Prasad VM, Kaur S, et al. Awareness regarding the adverse effect of tobacco among adults in India: findings from secondary data analysis of Global Adult Tobacco Survey. BMJ Open. 2021;11:e047079.
(8) McKay AJ, Patel RK, Majeed A. Strategies for tobacco control in India: a systematic review. PLoS One. 2015;10(4):e0122610.
(9) Pahwa V, Pimple SA, Bhattacharjee A, Kuberkar D, Mishra GA, Chaturvedi P. Behavioural interventions for tobacco cessation in India: a systematic review and meta-analysis. J Family Med Prim Care. 2023;12(11):2542-2551.
(10) Sajid M, et al. Non-pharmacological interventions for tobacco cessation in India: a systematic review and network meta-analysis. Nicotine Tob Res. 2023;25(10):1715-1725.
(11) Jha A, et al. Assessment of knowledge, attitude, and practices and motivation to quit tobacco habits in relation to age and educational status among male tobacco users visiting a Government Dental College Hospital, India. J Family Med Prim Care. 2020;9(10):5162-5168.
(12) Singh A, et al. Trends and determinants of tobacco use initiation in India: analysis of two rounds of the Global Adult Tobacco Survey. BMC Public Health. 2023;23:1647.
(13) Singh A, et al. Education differential in relation to tobacco use and its predictors across different regions of India. Indian J Community Med. 2018;43(2):110-115.
(14) Sarkar S, et al. Socio-cultural determinants of tobacco consumption: a study of migrant and local workers in a district of Punjab, India. J Family Med Prim Care. 2022;11(10):6405-6411.
(15) Critchley JA, Unal B. Health effects associated with smokeless tobacco: a systematic review. Tob Control. 2003;12(4):397-405.
(16) Boffetta P, Hecht S, Gray N, Gupta P, Straif K. Smokeless tobacco and cancer. Lancet Oncol. 2008;9(7):667-675.
(17) Boffetta P, Hayes RB, Sartor O, et al. Tobacco smoking and oral cancer: a meta-analysis. J Cancer Epidemiol. 2008;2008:1-9.
(18) Akl EA, Gaddam S, Mustafa RA, et al. The effects of waterpipe tobacco smoking on health outcomes: an updated systematic review and meta-analysis. Int J Epidemiol. 2017;46(1):28-46.

(19) World Health Organization. WHO report on the global tobacco epidemic 2023: protect people from tobacco smoke. Geneva: WHO; 2023.
(20) World Health Organization. WHO Framework Convention on Tobacco Control. Geneva: WHO; 2003.
(21) Government of India. The Cigarettes and Other Tobacco Products Act, 2003. New Delhi: Ministry of Health and Family Welfare; 2003.
(22) World Health Organization. MPOWER: a policy package to reverse the tobacco epidemic. Geneva: WHO; 2008.
(23) World Health Organization. WHO guidelines for implementation of Article 14 of the WHO Framework Convention on Tobacco Control: demand reduction measures concerning tobacco dependence and cessation. Geneva: WHO; 2010.
(24) U.S. National Cancer Institute, World Health Organization. Monograph 21: The economics of tobacco and tobacco control. Bethesda (MD): National Cancer Institute; Geneva: WHO; 2016.
(25) World Health Organization. Tobacco: health effects and tobacco control resources [Internet]. Geneva: WHO; 2025 [cited 2026 Sep 16]. Available from: https://www.who.int/health-topics/tobacco