



# Role Of Homoeopathy In Smokeless Nicotine Tobacco-A Narrative Review

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## Abstract

Smokeless tobacco is one of the widest issues among the Indian society but the least concerned about the consequences there are significant gaps in our knowledge regarding the measurement of ST dependence, sociocultural influences, and consequences associated with the use of Indian ST products. Consumption of ST causes life threatening disease among the people .There are variety of Products available in the market and the use of these products by the adults in high proportion. According to some estimates, more than 600 million people use chewing tobacco products worldwide. To help people avoid or postpone addiction to tobacco use and to prevent the onset of withdrawal symptoms in the event that they choose to stop using it, The role alternative and complementary medicines plays a vital role in treating disorders associated to tobacco use. Homoeopathy is one of the complementary natural system based on the Principle "Similia Similibus Curentur" treat the patients as a whole on the basis of Individualization.

**Keywords:** Addiction, Homoeopathy, Tobacco, Smokeless Tobacco, Nicotine

## Introduction

Smokeless tobacco refers to tobacco products that are swallowed without being burned. Smokeless tobacco is mostly to blame for the harmful health effects of tobacco use <sup>[1]</sup>. The bulk of these products contain a variety of ingredients, including tobacco, areca nuts, slaked lime, flavourings, sweeteners, and cancer-causing nitrosamines<sup>[1]</sup>. Pharyngeal and oral cancers account for the majority of these fatalities. One sort of smokeless tobacco that is popular in many parts of India is chewing tobacco. Chewing tobacco is placed in the mouth or cheek and then sucked, chewed, or in some cases even used as toothpaste, according to the World Health Organization (WHO). Many varieties of smokeless tobacco products the smokeless tobacco brands were identified as Madhu Chap, Hans Chap, and Miraj. In the Indian tobacco market, brands like Khaleja and Rebel are examples of gutkha. The Panmasala are the brands of products from Vimal, Hira, Rajnigandha, and RMD that are made in India. The health advisory Warning statements like "Tobacco kills/causes oral cancer/Chewing tobacco is unhealthy/Chewing tobacco Panmasala could be damaging to your health" are commonly found on the packaging of SLT products

The mixture might also contain sweets, and flavouring the areca nut is customary in commercial items (like supari). It was established through a number of population-based epidemiological studies conducted in India that betel quid users also chew tobacco. Smokeless tobacco products have been shown to be simple to find in stores and are often much more affordable than cigarettes <sup>[2,3]</sup>. Tobacco products must be made less accessible, the general public must be made more aware of them, and attitudes about their use must alter. On the packaging of smokeless tobacco products, health warnings must be evident. Yet, due to lax enforcement of the laws governing the health warnings for smokeless tobacco products, research has found that about 85% of these are distributed to the general public without the mandatory health warning. Smokeless tobacco products, for example, are not required to have codes on their packaging to indicate the location, date, and time of manufacturing. The rules governing smoked tobacco and smokeless tobacco are different. Another distinction is that there only needs to be one health warning on the packaging of smokeless tobacco products. The structure and placement were identical to those for cigarettes <sup>[2]</sup>, but regulations



regarding the warning's size were not immediately obvious. There are guidelines for the font, size, and positioning of health warnings, unlike smoked tobacco products, which are required to carry one warning on both the front and back of their packaging. [4] reached the conclusion that the government's emphasis on smoked tobacco eclipses the emphasis that should also be placed on smokeless tobacco use, leading to a rise in the disregard for the laws governing the sale of smokeless tobacco products behind counters, the use of health warnings, and the use of signage for underage sales. The Food Standards Agency is said to have jurisdiction over betel or areca nuts because they are considered to be foods (NICE, 2012). NICE (2012) also stated that the "Agency is currently working with UK Asian communities to provide suggestions on how to minimise the harm from consuming foods that contain Areca nut".

One in five adults (15 and older) who use tobacco (28.6%) also use smokeless tobacco (SLT), and 75% of these adults reside in rural regions. SLT is widely used by both men and women in India. Women often use betel quid with tobacco, followed by oral application of tobacco and khaini, whereas men typically drink khaini and gutka. In India, SLT use is getting close to 50%, with smoking and dual tobacco use closely behind.

### Reason for High Prevalence

One of the main reason for higher prevalence of ST is that availability of wide variety of ST products consumed in their region with high potential addiction, second one is socioculture factors that are specific to ST use with in the region and the third one anti tobacco policies with in the region which tend to have the greater focus on cigarette smoking.

### Nicotine Content

With average nicotine content of 16.8 mg/g, dry snuff has the highest nicotine content, followed by moist snuff (12.6 mg/g) and chewing tobacco (9.9 mg/g).

### ST Products with high potential for dependence

ST products are used around the globe but India has the widest range of products and its usage. In recent years the use of ST is increase because of availability of wide no of variety product which have transitioned from their traditional handcrafted forms to more Professionally pre packaged products .In India tobacco Infused in the form of Zarda, Kahini, Betel quid, Mishri, Mava, Gutkha are now popular substances in the region. An Overview of their application and description in below Table

Name of Product	Product Description and method of use
Betel quid (paan) with tobacco	Contains tobacco, areca nut, slaked lime (calcium hydroxide) or other alkaline agents, betel leaf, and usually catechu ( <i>Acacia catechu</i> tree extract). It is chewed or held in mouth.
Mawa	Tobacco, betel nut, natural, synthetic flavours lime, aromatic spices, sounf and menthol It is chewed or held in mouth
Creamy snuff	Contains tobacco, clove oil, glycerine, spearmint, menthol, camphor, and water. It is applied to teeth and gums like a toothpaste.
Gutkha	Contains tobacco, areca nut, slaked lime, catechu, and other condiments, sweeteners, and flavourings. It is chewed or held in mouth.
Khaini	It contain dried tobacco leaf , arena nut ,slaked lime which is used by chewed ,held in mouth.
Kiwam	It contain Tobacco , spices and musk which is used by chewed and kept under in mouth.
Mawa	It Contain Tobacco ,slacked and arena nut which is used only by chewed.
Misri	It contains dried tobacco powder which consume by rubbing on gums , teeth and can be sucked too.
Red toothpowder	It is having Red color Powder which is flavoured with Tobacco and herbs. Used by massaging directly on gums and teeth.
Tobacco leaf	It is having dried leaf of tobacco. It chewed itself ,Mixed with other tobacco product also .
Zarda	It contains Spices, vegetable dyes, lime and other arena nut. Which consume by chewing it and mixed with other tobacco products.

The tobacco products that have the addictive properties can also be influenced by the other related factors such as the amount of nicotine contained in the product, its design and speed of nicotine delivery, as well as



other ingredients included, it is crucial to conduct research on tobacco dependence associated with the use of specific product types.

### **Risk factors for tobacco initiation** <sup>[5]</sup>

Following factors influence the tobacco use:

**1 Psychological risk Factors:-** Belonging to a lower socioeconomic group, peer smoking prevalence, the adolescent's environment, friends' and parents' attitudes and behaviors, a lack of parental supervision, poor academic performance, and prior tobacco use experimentation are all psychosocial risk factors.

**2. Behavioural and psychological factors** - Nicotine is one of the most addictive medications due to its continuous use and the fact that withdrawal symptoms are frequently avoided with each cigarette. Additionally, certain behaviors, such as smoking following a meal, while talking on the phone, or while operating a motor vehicle, tend to be associated with smoking and encourage.

**3. Marketing and Social and Environmental variables:** Social and environmental variables have the power to both promote and deter tobacco usage. For instance, the implementation of smoke-free rules, tariffs, and social penalties can deter use, whereas being among friends or family members who smoke can promote smoking. Use of tobacco is widespread worldwide. <sup>[5,6]</sup>

942 million men and 175 million women over the age of 15 smoke cigarettes today in the world. The Western Pacific region has the greatest rate of tobacco use among males, followed by Europe, the Eastern Mediterranean, and South-East Asia. Due to cultural and religious considerations, its prevalence is lower in Egypt, Sri Lanka, Ghana, Bangladesh, Iran, Congo, China, and India than it is in Europe, the Americas, and the Western Pacific region.

Secondhand smoke exposure is widespread, especially in Asia. More than 80% of people in Indonesia and Pakistan are exposed to secondhand smoking in restaurants. Worldwide, secondhand smoke exposure in 2016 was projected to have affected one-third of women and one-fifth of men, and it contributed to an estimated 884,000 fatalities. Smokeless tobacco use is most prevalent (90%) in South-East Asian nations, particularly in Myanmar, India, Nepal, Bangladesh, and Sri Lanka. It is also widespread in Eastern Mediterranean nations, primarily Pakistan, and Western Pacific nations, including China, Cambodia, and Malaysia.

### **Prevalence of Tobacco in India**

With more than 200 million users of smokeless tobacco and 276 million total tobacco consumers, India is the second-largest consumer of tobacco products. Only 10.7% of India's total tobacco consumption—an estimated 28.6%—comes from smokers, while the remaining 21.4% comes from smokeless tobacco products. Of the estimated 1 million tobacco-related deaths per year, India is home to 12% of the smokers in the world. Smoking and secondhand smoke exposure kill 0.93 million people annually, and smokeless tobacco use kills an additional 0.02 million people annually in India, making up 74% of the global burden of smokeless tobacco. <sup>[7]</sup>

### **Tobacco use and its associated health risks**

More than 7 million people die from tobacco use each year, more than 6 million of whom die directly from tobacco use and over 0.89 million of whom die from secondhand smoke. In the world, tobacco is responsible for about 8.8% of deaths and 4.1% of Disability Adjusted Life Years (DALY). By the 2020s or the beginning of 2030, the number is anticipated to increase to 10 million deaths annually. <sup>[8]</sup>

- **Cardiovascular diseases** <sup>[9,10]</sup> Tobacco usage has a strong association with the two leading causes of death worldwide: heart disease and stroke. Smoking increases the risk of coronary heart disease by working in concert with other risk factors including high cholesterol and blood pressure.
- **Cancers associated with tobacco** Additionally, smoking is linked to cancers of the cervix, oral cavity, nasal cavity, lungs, liver, pancreas, kidney, and upper gastrointestinal system. <sup>[11]</sup> The primary risk factor for mouth cancer is smokeless tobacco. More than 90% of oral cancer cases, according to studies, are brought on by cigarette smoking. <sup>[12, 13]</sup> Using tobacco for a longer period of time, using more tobacco products per day, and inhaling it more deeply all raise the risk of acquiring cancer. <sup>[14]</sup>
- **Tobacco and reproductive health of women** <sup>[7, 13]</sup> Through its stimulation of growth hormone, cortisol, vasopressin, and oxytocin release, nicotine causes hormonal imbalance, which in turn inhibits the release of luteinizing hormone and prolactin, reducing fertility, decreasing chances of conception, increasing menstrual abnormalities, and bringing on early menopause in women. Annual exposure to maternal smoking in gestation of more than 0.4 million newborns is estimated. It makes problems including ectopic pregnancies, early membrane rupture, placenta previa, placental abruption, preterm delivery, and shorter gestation more likely.



Low birth weight, congenital malformations, particularly orofacial clefts, lower respiratory illnesses, otitis media, middle-ear effusion, decreased lung function, congenital heart defects, limb abnormalities, central nervous malformations, and sudden infant death syndrome (SIDS) are all adverse health effects that newborns experience.

- **Mental Illness** Smoking is more prevalent among those who have mental illnesses than it is among those who do not. Smoking may make psychiatric drugs less effective and may worsen the symptoms of schizophrenia, bipolar disorder, and anxiety disorders.
- **HIV** Patients with the Human Immunodeficiency Virus (HIV) who smoke do so at higher rates and younger ages than HIV-infected people who do not smoke
- **Substance use disorders-** Adolescents are far more likely to consume and get dependent on tobacco when they utilize illegal drugs or alcohol.

### Role of Homoeopathy in Tobacco addiction

Homoeopathic principles, like all other concepts, have been found and refined through trial and error, experimentation, and growing knowledge. Principles do not consider time to be a factor. Time simply provides a better opportunity to examine the outcomes of applied principles and the operation of natural laws. <sup>[14]</sup> It's important to think carefully before using cigarettes. Smoking should never be allowed when a person's ability to think clearly, sleep soundly, digest food properly, or evacuate waste is impaired. The use of this palliative must be limited if evacuation happens only after smoking, and an antispasmodic should be left to complete the task instead. Similar to smoking, using snuff significantly impairs the treatment of chronic illnesses and should be reduced daily until finally discontinued. <sup>[15, 16]</sup> . However, it is believed that a little increase in stimulants like alcohol, tobacco, and snuff might work as a potent preventative measure against infectious diseases. <sup>[17]</sup> Homoeopathy can be quite effective in both preventing and treating diseases linked to tobacco use. Before discussing how to treat tobacco sickness, it is important to note that the habit of chewing tobacco falls under the category of maintaining cause <sup>[18]</sup> and should be stopped first. If this is done, the problems may then go away in their own. However, if the symptoms persist for a long period after stopping smoking, the patient will need a proper homoeopathic medication. When a smoker is trying to quit, homoeopathy is also beneficial since it relieves withdrawal symptoms.

### Homoeopathic therapeutics

- **Caladium:-**Caladium, one of the most effective treatments for tobacco cravings, encourages a hatred for tobacco, frequently to the point of nausea or vomiting if administered while smoking. Fear of motion is a crucial symptom for this treatment. There may also be catarrhal asthma, dyspnea, headaches, and memory loss. Motion makes symptoms worse, and they get better after sleeping. Camphor This condition is characterized by an icy coldness that frequently comes with a throbbing occipital headache, sleeplessness, a frail bradycardia, and a severe, dry, hacking cough. The effects of motion and darkness are worse than those of warmth. <sup>[21, 22]</sup>
- **Tabacum:-**Tabacum, like Nux vomica, is supposed to help the body rid itself of the poisons delivered by tobacco smoking. This has yet to be confirmed, but in the cases when it is described, it appears to have a significant impact on cigarette cravings. Cold extremities, morning headaches, indigestion, palpitations or vertigo, prostration, hypertension, dizziness, nausea, confusion, and lack of concentration are among symptoms that might be used to support this theory. Symptoms are worse at night and get better during the day, and they come on slowly. A variation of this cure, Tabacum fumar, the medication created from tobacco smoke, can be taken in low potency as an emergency measure for acute cravings. <sup>[22, 23, 24]</sup>
- **Plantago:-**Plantago has been demonstrated to create an aversion to tobacco in its mother tincture form, and is used to treat "nicotinism," a historical term for tobacco addiction. Depression, insomnia, constipation, and nocturnal enuresis are all symptoms that it's time to start taking it. <sup>[24]</sup>
- **Arsenic Album:-**The Arsenicum type presents a typical picture of the recently ex-smoker: restless, concerned, constantly shifting, fearful, rapidly weary, underweight, and any region of pain often has a searing nature. There may also be unquenchable thirst, burning eyes, respiratory catarrh, and lung pain. The symptoms are more severe in wet or cold weather, although they ease with heat and warm beverages. <sup>[21, 23, 24, 26]</sup>
- **Eugenia :-**The main factor connecting Eugenia and smoking is nausea, which is made better by smoking. Sometimes, a patient's attempts to stop smoking are continually foiled by nausea that is made better by smoking; in these cases, Eugenia can be quite helpful. <sup>[26]</sup>
- **Staphysagria:-**Irritability, hypersensitivity, sleeplessness, stupefying headaches, a need for stimulants (which certainly includes tobacco), and itchy skin are the main signs of staphysagria. The effects of mental stress and other people touching the affected areas make symptoms worse, while warmth and repose after sunset improve them. <sup>[21, 22, 24]</sup>





- **Avena sativa q:-**Avena sativa is useful for quitting smoking since it reduces a person's feeling of weakness and gives them back their vitality.
- **Nux vomica :-**Nux vomica is a successful treatment for quitting smoking. The detoxification of the harmful substances ingested from tobacco smoke is aided by nux vomica. When headache, vertigo, sleeplessness, food cravings, constipation, and dyspnea are present, nux vomica is recommended. Patients taking nux vomica report severe depression, irritability, tension, and anxiety when attempting to quit smoking. The symptoms are worsened by mental and physical exertion in the morning and improved by relaxation and sleep.<sup>[21,22,23,24,25]</sup>
- **Ignatia amara:-** Ignatia amara is the finest remedy for smoking's negative consequences. Ignatia patient is addicted to nicotine. Patients with Ignatia are very excitable and have sensory hypersensitivity. When severe mood swings, sadness, headaches, sour eructations, dry spasmodic coughs, and cramping pain in the back, neck, or abdomen are present, Ignatia is recommended. Smoking habits have also been linked to insomnia. Morning symptoms are exacerbated by coffee or smoking, and they improve with sitting down or moving around.<sup>[23,25,26]</sup>
- **Lobelia inflata q:-**One of the best treatments for stopping smoking is lobelia. Patients with lobelia have a need for tobacco but are unable to handle its taste or scent. When respiratory symptoms like asthma are prevalent, lobelia is administered. Exercise, cigarette smoke, and cold make respiratory symptoms worse; quick walking makes them better.<sup>[25,26]</sup>

### Previous Research in Homoeopathy

Data were collected from the various search engine like google scholar, Pubmed, CHINAL, Medline, Embase etc... only those articles were considered which has role of Homoeopathy in the Tobacco addiction with full text availability. Only 9 papers were found which shows the role of Homoeopathy in Tobacco de-addiction but none of the paper found related only with smokeless tobacco. In the below mentioned table all the article with their conclusion.

Author	Title of Research	Year of Publication	Conclusion
De la Rouviere <sup>27</sup>	An evaluation of the efficacy of acupuncture and homoeopathic treatment in helping people to stop smoking	1996	They uses two Therapy acupuncture and Homoeopathy Both shows the effectiveness of 40% in quitting the Tobacco
Pautz et al <sup>28</sup>	The relative effectiveness of isotherapy compared to isotherapy and similimum in managing tobacco smoking addiction	1998	Here they uses two therapies Isopathy & Homoeopathy .They found Homoeopathy Similimum medicine is more effective than Isopathy
Hellberg <sup>29</sup>	An evaluation of the efficacy of a homoeopathic complex in the management of cigarette addiction.	2001	A double blind placebo control trial was conducted complex Homoeopathy remedies and placebo were given. The study showed a significant reduction in cigarette use for both the homoeopathic complex and the placebo, the researcher also conclude that the homoeopathic complex's remedies might not always helpful in doing so.
Lutchman-Maharaj <sup>30</sup>	A placebo controlled study determining the effectiveness of homoeopathic complex (Caladium seguinum 30H, Nux vomica 30 CH and Staphysagria delphinium 30 CH) as compared with homoeopathic similimum treatment in the management of tobacco addiction	2002	3 group were taken into the study homoeopathy complex, Homoeopathy Similimum & placebo. The researcher came to the conclusion that homoeopathic treatments were ineffective for treating nicotine addiction since they provided no additional benefit above placebo.
Catherine Joy Riggien <sup>31</sup>	The effectiveness of a homoeopathic complex (Caladium seguinum 30CH, Nux vomica 30CH and Staphysagria delphinium 30CH) compared to a tautopathic preparation of the cigarette smoked in the management of nicotine withdrawal syndrome.	2011	The study concludes that each of the four subject groups (including placebo) proved to be successful in aiding the participant to cease smoking. The results showed a significantly positive perception of the participants to the interventions used



Indu shukla <sup>32</sup>	A prospective Observational Study on the Therapeutic Effect of Plantago Major in Reducing Craving for Tobacco	2019	The researcher showed that plantago Major is having a great role in cessation on Tobacco. dependence
Bomble et.al <sup>33</sup>	Comparative efficacy of nonnicotine Replacement Therapy(Homoeopathy medicine)and Placebo with Behavioural Counseling on Tobacco Abstinence Among Adult Tobacco Users in Pune	2021	The study was Triple blind placebo Controlled trial showed The mean reduction in frequency of tobacco and the dependency scale in both the groups were found significantly
Samaran R et.al <sup>34</sup>	Tobacco Smoking and Homoeopathy –A Review	2022	Study shows that Homoeopathic Medicine are beneficial in tobacco smoking
Coindard Guillaume et.al <sup>35</sup>	Attitude and Behaviour towards the management of tobacco smoking patient: Qualitative study with French Primary care Physician	2022	Tobacco smoking cessation by the different strategies like motivational interview, nicotine replacement therapy and supporting therapist they reported that progress has been made by the recent tools and technology and general awareness but still faces the barrier

## Conclusion

From the data collected we came to the conclusion that there are very less research work done in this field so from on the basis of this we can say that Homoeopathy can be a choice for Tobacco De-addiction but we need more proofs to proven it authenticity .There are literature available in Homoeopathy Materia Medica that various remedies in Homoeopathy plays a vital role in quitting the tobacco.So Homoeopathic therapies can aid in lowering the craving in tobacco users who are trying to stop. It is crucial to make an effort to create research methods in homoeopathy on the process of addiction in all forms of tobacco use. Therefore, the urgent need of the hour is for a diversified homoeopathic strategy and research initiatives.

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