Journal of Neonatal Surgery
ISSN(Online): 2226-0439
Vol. 14, Issue 26s (2025)
https://www.jneonatalsurg.com

OPEN ACCESS

Tobacco and Toil: A Narrative on Dependency on Tobacco Among Brick Workers

Bhumika Gupta[1], Swati Sharma*[2], Faisal Noor Ahmad[1], Sakchhi Tiwari[1], Shivangi Shankar[3], Skand Manjul[3] Sushmita Singh[3], Suparna Keshri[3]

[1]Assistant Professor, Department of Public Health Dentistry, School of Dental Sciences, Sharda University, Greater Noida, Uttar Pradesh, India.

[2]PhD Scholar, Head of Department, Department of Public Health Dentistry, School of Dental Sciences, Sharda University, Greater Noida, Uttar Pradesh, India.

[3]School of Dental Sciences, Sharda University, Greater Noida, Uttar Pradesh, India.

***Corresponding Author:**

Swati Sharma,

PhD Scholar, Head of Department, Department of Public Health Dentistry, School of Dental Sciences, Sharda University, Greater Noida, Uttar Pradesh, India.

Email ID: swati.sharma@sharda.ac.in

Cite this paper as: Bhumika Gupta, Swati Sharma, Faisal Noor Ahmad, Sakchhi Tiwari, Shivangi Shankar, Skand Manjul, Sushmita Singh, Suparna Keshri, (2025) Tobacco and Toil: A Narrative on Dependency on Tobacco Among Brick Workers, *Journal of Neonatal Surgery*, 14 (26s), 243-248

ABSTRACT

The global incidence of oral cancer has risen to 5%, but India's share tells a grimmer story. India is bearing a disproportionate burden, representing 40% of the world's 60,000 annual new cases. The Human toll is devastating, clocking more than six deaths per hour, highlighting it's deadly trajectory.

Gautam Buddha Nagar's chai stalls narrate mute tales – of cigarette-tough hands reaching for tobacco pouches rather than food; of lunch hours spent sucking on despair instead of sustenance. Here in India's factory, fatigue gets rolled into bidi leaves and desperation chewed up with betel nut, one temporary relief at a permanent price.

There is an inevitable link between oral cancer and tobacco, with the smokeless tobaccos, such as gutka and khaini, being especially malicious. In two, we found a silent pandemic of oral malignant disorders— smoker's palate, OSMF & leukoplakia—each a precursor for a darker destiny. Smoker's palate veils tissue devastation under its skeletal white appearance, while leukoplakia's intransigent white spots portend an incipient malignancy. OSMF constricts its hold, converting soft tissue into an immovable cage, and erythroplakia, with its ominous red colour, is a silent killer, its cancerous change almost unavoidable. These are not merely ailments but signs, carved in flesh, disregarded at a deadly price.

Despite measures to control tobacco, such as the Cigarettes and Other Tobacco Products Act (COTPA), poor enforcement, aggressive promotion, and entrenched cultural tolerance have hindered progress. The warnings are ignored, the risks unseen—until it is too late.

In our periodic health camps at the brick kiln fields, we started to see the real extent of this disease. Among the mountains of freshly fired bricks, we saw workers whose mouths silently testified to years of addiction—white lesions, fibrotic tissues, and precancerous lesions speaking of a dark future. A survey of 188 labourer's employed in brick kilns uncovered a starkly worrying reality. This article mines the depth of dependence among these workers, disentangling the complex interplay of social, economic, and psychological influences that trap them. It lays bare the failure of prevention, the complacency in early detection, and the almost insurmountable obstacles to treatment.

The signals are present, etched into fate and flesh—signs not to be overlooked. The moment is not to do anything when cancer establishes itself, but when its first shadow is cast..

Keywords: *Brick kiln worker, COTPA, Oral cancer, Oral premalignant conditions, OSMF, Tobacco*.

1. INTRODUCTION

India is a developing country, and its population is increasing exponentially. Continuous urbanisation has caused increased

demand for building materials such as baked bricks. The easy availability of clay and cheap labor in rural areas has led to a rise in brick kilns, particularly in Uttar Pradesh, Rajasthan, and Haryana. Brick manufacturing is the fastest-growing industrial sector in many countries (like China, India, Bangladesh and Pakistan). Additionally, these brick kilns require minimal investment. The cheap labor and the requirement of very little knowledge or skills make it one of the best jobs for rural people. Even farmers can participate in such work since they have limited time on the farm. In rural areas, bricks are still produced using traditional methods, including hand molding, sun drying, and firing in clamps.[1]

The conventional practice of firing clay bricks consumes significant amounts of fuel, mainly wood and coal. However, many cheaper alternatives are now being used due to rising coal prices. These include firewood, old rubber tires, discarded motor oil, plastic, used lubricant oils, poultry farm droppings, dung cakes, and agricultural residue.[2]

According to 2014, India has more than 100,000 brick kilns producing around 250 billion bricks annually. [3]

Tobacco is not a habit for such workers; it is a crutch, a coping mechanism, and, all too often, a slow poison they cannot shun. In India, where oral cancer has been responsible for almost 40% of all cancer cases, the link between tobacco and disease is clear. However, in spite of legislation such as the Cigarettes and Other Tobacco Products Act (COTPA), poor enforcement and entrenched cultural acceptability keep it alive.

In the industrial belt of Uttar Pradesh, that is Gautam Buddha Nagar, working men and women in brick kilns use smokeless tobacco and bidis not to enjoy but to survive. Their incessant manual labour, abject poverty, and inability to access health care drives them into a trap of addiction, one of temporary relief but a fatal cost.

This narrative review throws light on a sombre truth, based on a survey of 188 tobacco workers in brick kilns. It unravels the economic, social, and psychological bondage that holds them captive to tobacco, laying bare systemic failures in prevention, early detection, and treatment. They construct the cities we inhabit, but their pain is hidden beneath the bricks they pile. Let us shatter the silence before tobacco snatches away yet more lives

Tobacco Use: A Coping Mechanism

Tobacco is often relied on as a coping mechanism for stress, anxiety, and other mental health concerns, particularly among those at risk. For example, in India, approximately 7.3% of adolescents will suffer a mental health episode; while some engage in tobacco use, they only exacerbate their already poor mental health. India has a serious smokeless tobacco (SLT) problem, as 21.4% of adults are regular users. Tobacco users are commonly men and other vulnerable groups such as teenagers, children, and pregnant women.[4]

Our recent health camps around brick kiln areas revealed alarming tobacco use patterns. Out of the 188 people who were evaluated, 63, or 33.5%, were found to use tobacco. From that group, 55 people were male, along with 8 people who were female. This finding indicates the high prevalence with tobacco consumption among many laborers. Harsh working conditions, social influences, meaningful economic burden, and insufficient awareness may contribute to its use as a stress-relief mechanism. Peer influence is a major reason that many workers of this type begin tobacco usage at a young age. Another contributor is the common presence of inexpensive tobacco products. Furthermore, the important shortage of entry into many healthcare services around certain areas prevents generally effective interventions, rendering it difficult on several users toward quitting. It is vital to employ campaigns for awareness and specific programs toward ending the addictive behavior.

Stress is a key driver of tobacco consumption and relapse among Indian women, with anxiety being one of the main reasons for continued smoking and inability to quit.

Further, social and behavioral factors, peer influences, and unawareness also have a profound impact on the initiation and use of tobacco among Indian youth. A qualitative investigation in urban India showed that these factors are responsible for the initiation of tobacco use and thus warrant intervention.

Prevalence of Tobacco Use

India has a staggering tobacco epidemic, with 267 million adults (29%) using tobacco products .[5] The epidemic presents stark gender differentials: 29.6% of men and 12.8% of women use smokeless tobacco, whereas the prevalence of smoking is 19.0% among men but only 2.0% among women .[5] Worryingly, the addiction starts early – 8.5% of teenagers (13-15 years) already consume tobacco, with boys (9.6%) being more impacted than girls (7.4%) .[6]

The statistics reflect a multigenerational health crisis. In children, 3.5% of boys and 1.6% of girls smoke cigarettes, and 4.6% of boys and 3.4% of girls use smokeless tobacco. [6] These figures amount to millions of children's lives being damaged prior to reaching adulthood and creating a pattern of dependency calling for prompt intervention. The facts highlight to what extent tobacco has penetrated Indian society across every level.

The Silent epidemic: Oral Malignant Lesions

Oral premalignant conditions is used to define pathologies capable of undergoing malignant transformation present inside the oral cavity. Approximately 1.5% to 4.5% of people worldwide have oral premalignant lesions. Leukoplakia , Oral submucous fibrosis, Erythroplakia, and lichen planus are the most commonly found oral premalignant Lesions.[7]

About 2% of people worldwide have oral leukoplakia, which is described by the WHO as a white lesion of the oral cavity mucosa that cannot be classified as any other disorder. [8]Although leukoplakia can occur in people of any age, young adults are more frequently affected. Clinically, leukoplakia can impact any area of the oropharynx and oral cavity. The homogeneous type of leukoplakia is marked by a consistently flat, thin texture that appears uniformly white and may exhibit a slight fissure on the surface of the pale patch. The non-homogeneous type is identified as a lesion that is both white and red, referred to as erythroleukoplakia, typically showing an irregular flat (speckled) or nodular form. Another variant of non-homogeneous leukoplakia is verrucous leukoplakia. Proliferative verrucous leukoplakia is a subtype of verrucous leukoplakia, distinguished by its multifocal nature. This type poses a significant risk for malignant transformation and is often resistant to treatment. Leukoplakia, which has a 2.9% overall prevalence in the general population , and submucous fibrosis, which has a nearly 11% prevalence in high-risk populations , are the most prevalent PMDs.[9]

Oral Submucous Fibrosis (OSMF) is another most common precancerous lesion which shows fibrosis of the submucosal tissue as well as inflammation. OSMF is most commonly observed in individuals during their twenties and thirties, affecting both males and females. It is uncommon in children. Areca nut, gutkha, paan and other tobacco products are the primary cause of this lesion. The initial indication of OSMF is the whitening of the oral mucosa, resulting in a mottled, marble-like look. [10]The developed lesions of OSMF display noticeable fibrous bands that are crucial for making a diagnosis. Individuals frequently report a burning sensation and/or difficulty tolerating spicy foods. Nonetheless, as time passes, the condition progressively advances and leads to fibrosis, which impacts the ability to open the mouth and causes truisms. OSMF shows a malignant transformation rate of 7.6%.[11]

Tobacco contains a variety of tissue damaging substance. Arecoline, copper, and polyphenol fragments (flavonols, tannins) are among the active constituents in paan. These substances cause a strong acute inflammatory response that is characterized by vascular dilatation and a polymorphic infiltration. Blood vessels in the afflicted area eventually obliterate as a result of constrictive vascular alterations and a persistent immunological response. Smokeless tobacco use has a risk factor for smokeless tobacco keratosis (STK) because smokeless tobacco inflicts chronic irritation of the oral mucosa. The STK or its manifestations inside the oral cavity is determined by the frequency and quantity of use. An STK generally develops as a slightly wrinkled grayish-white patch in which severe STK indicates sites with an exaggerated surplus of keratinized epithelium. Histopathologically, the epithelium is characterized by parakeratosis and acanthosis; dysplasia is usually associated with hyperchromatic nuclei at the basal layer. There is minimal connective tissue involvement, and connective tissue alteration is usually restricted to collagen sclerosis around blood vessels and nerves. Withdrawal from smokeless tobacco should lead to disappearance of STK in weeks to months. However, there remains a small incremental risk for oral cancer. [12]

Barriers to healthcare Access

- *Noticing when care is needed (approachability):* The first step in getting help is realizing something's wrong. However, this is not always easy—people's understanding of health, past experiences, or cultural beliefs can all influence how they perceive illness.[13] It also depends on the openness and approachability of health services. If clinics make an effort to reach out, explain their services, and educate people, it becomes easier for someone to know where to go and when.
- *Feeling comfortable with the care offered (acceptability):* Even when help is available, people won't always feel safe or comfortable using it. Sometimes, the way care is delivered doesn't match someone's personal or cultural values[13]. If services feel unfamiliar or clash with a person's beliefs, they might hesitate or avoid care altogether.
- *Being able to physically get to care (availability):* Getting to a doctor or clinic can be a challenge in itself. Things like not having a car, dealing with a disability, or having a rigid work schedule can make it hard to access care, even if it's technically nearby.[13]
- *Being able to afford care (affordability):* Money and time are big factors. People need to consider not just the cost of treatment, but also time off work, transportation, or childcare[13]. If healthcare feels too expensive—financially or otherwise—it can become unaffordable.
- *Being part of your own care (appropriateness):* Good care isn't just about treatment—it's about making sure the care fits the person. This means it's timely, coordinated, and of high quality [13].But it also means patients are involved in decisions and feel empowered to follow through with treatment that makes sense for them.

Policy Intervention Tobacco Control

- *ICANCARE – A Beacon of Hope*

In 2015, a determined but small healthcare initiative sprouted in Haryana. Called ICANCARE (Innovative Cancer Care & Rehabilitation), it wasn't merely another medical centre—it was a lifeline for those battling cancer and tobacco addiction [14]. Beyond providing life-saving medication, ICANCARE provided something just as essential: dignity, grassroots awareness, rehabilitation programs, tobacco decision-making, and grassroots awareness initiatives. [15] The organisation has touched numerous lives throughout India. Their practice isn't merely about curing disease—it's about empowering individuals to take back their health, step by step.

- *COTPA – The Law That Listened*

In 2003, India moved boldly ahead with Cigarettes & Other Tobacco Products Act (COTPA)—legislation not merely to control, but to guard[16]. It outlawed glitzy tobacco commercials that previously used to glamorize addiction, brought to book unregulated sales, and most importantly, protected non-smokers from poisonous secondhand smoke[17]. Laws, however, are only the beginning. That's where efforts such as ICANCARE's "Sunday Lives" speeches and e-conclaves step in—converting policy into action on the ground by educating, empowering, and providing hope.[15]

All these combined remind us that change isn't about rules or medicine—it's about people. Whether it's a brick kiln laborer overcoming addiction or a child saved from secondhand smoke, each small win is a step towards a healthier India.[18]

The Human Cost

Indian brick kiln workers are exposed to immense dangers from their poor working conditions and the coping strategies they adopt to survive the ordeal. According to our research, the prevalence of taboo consumption is significantly greater among these workers compared to that of the indigenous population [19]. Even though these coping strategies might give temporary relief from stress and allow work to proceed, the adverse effects can be catastrophic, leading to fatal outcomes [20]. These hazardous working conditions compromise their general health and significantly increase the incidence of respiratory diseases like bronchitis, asthma, and other lung conditions, alongside a variety of other health problems associated with these poor conditions [21]. A survey indicated that 28% of the respondents had dermatological problems, 20% had asthma, 18% had headaches, 10% had ocular pain, and 10% had bronchitis[22]. These medical issues are further compounded by exposure to dangerous kiln exhausts, such as carbon dioxide and particulate matter, that lead to respiratory and cardiovascular illnesses, ultimately causing premature death[23].

Breaking the cycle: strategies for a better future

The first step would be to enhance the working conditions in order to avoid this safety and health risk [24]. Necessary measures have to be implemented to upgrade the work conditions and provide equal pay for such employees[25]. In addition, adherence to protection measures needs to be enforced uncompromisingly in order to maintain maximum working time for the factory and its staff; this will ensure that individuals get sufficient time to properly maintain critical life functions and address familial, health-based, and recreational needs [26]. Proper health care precautions, including the compulsory wearing of masks and gloves, needs to be enforced in order to eradicate skin and respiratory conditions[27]. In oral health improvement, the case is complicated by the prevalence of tobacco addiction and its related products among currently working workers; nevertheless, better working conditions would go a long way in reducing this addiction in the future[28]. For the already implored workers, not only must tobacco cessation advice and counselling be initiated, but treatment for those undergoing treatment is also critical[29]. This can only be achieved by responding to the underlying causes noted in our research: poor working conditions and economic struggles that force them to live under such harsh conditions[30].

2. CONCLUSION

"*Tobacco & Toil*" pulls back the curtain on the lines of Uttar Pradesh's brick kiln workers- men & women who labor in silence, constructing the foundations of our cities while trapped in exhaustion, poverty & a healthcare desert.

For these workers, tobacco is not a choice; it is a survival strategy, a momentary escape from the fatigue of their working lives. But this momentary escape came at a ghastly cost, for tobacco use has fueled a silent epidemic of oral premalignant lesions such as leukoplakia, oral submucous fibrosis (OSMF), and erythroplakia—lesions that often are precursors to oral cancer. The findings of this research paint a dismal picture of the human toll of tobacco dependence. In health camps organized between fields of brick kilns, 33.5% of workers interviewed consumed tobacco, and most of them were men. These men, who started smoking at an early age, get trapped in a cycle of dependence created by exploitative Working conditions, economic necessity, and lack of awareness. To them, tobacco is not a luxury but a coping mechanism-a tool to manage the unending pressures of their work. Yet its cost is devastating: marking their bodies with fibrosis, white lesions & other precancerous changes that serve as an ominous harbinger of a grim future. Despite legislative initiatives, the tobacco industry maintains its grip on them. This crisis persists due to aggressive marketing, poor oversight & cultural inertia.

The awful thing about this circumstance is that it was preventable. In addition to being medical diagnoses, the oral health problems identified in these workers are signs of systemic failures. Prevention failures, early detection failures, and treatment access disease failures. Failures that expose these workers to a future of disease and suffering. There is an opportunity for

change in this bleak reality; we can pause this ongoing cycle by tackling the socioeconomic & psychological forces behind tobacco dependency. The primary requirements are decent wages, better working conditions & last but most important access to healthcare.

Tobacco cessation initiatives, health promotion drives, public awareness campaigns & anti-tobacco laws are equally vital. Projects such as Icancare targeted diseases towards cancer treatment and smoking cessation, provide hope, yet it can only be achieved by working together. The fate of the brick kiln workers is not merely a matter of public health—it is an ethical imperative. They, who do so much for our country, are worthy of better. They are worthy of lives that are free from the shackles of addiction and the specter of disease. They are worthy of policies that are not merely scripted but enforced, and interventions that are not merely conceptualized but acted upon.

The time to act is today. By correcting the deep-rooted issues compromising their health, we can build a stronger, healthier & more prosperous future for these workers.

Honoring their efforts means giving them the chance to live longer, healthier lives- and with every life protected, we step toward a fairer world.

REFERENCES

[1] Nazir R, Ghaffar A, Saeed A, et al. Traditional brick making and environmental degradation: a case study of district Peshawar, Pakistan. Sci Res Essays. 2011;6(9):1949-1956.

[2] Darain KM, Rahman ABMS, Ahsan S, et al. Strength behaviour of clay brick masonry prisms with different bonding patterns. Int J Civ Environ Eng. 2013;7(4):263-268.

[3] Rajarathnam U, Athalye V, Ragavan S, et al. Assessment of air pollutant emissions from brick kilns. Atmos Environ. 2014;98:549-553.

[4] GATS India. Global Adult Tobacco Survey India (GATS-2) 2016-17. Ministry of Health & Family Welfare, Government of India; 2017.

[5] GYTS India. Global Youth Tobacco Survey (GYTS) 2019. Ministry of Health & Family Welfare & World Health Organization; 2019.

[6] Bhat R, Bhandary A, Karicheri V, Palakki G, Uday M. Antibody-Drug Conjugates: Advances and Applications in Targeted Cancer Therapies. Oral Sphere J Dent Health Sci. 2025;1(2):63-72.

[7] van der Waal I, Schepman KP, van der Meij EH, et al. Oral leukoplakia: a clinicopathological review. Oral Oncol. 1997;33(5):291-301.

[8] Parlatescu I, Gheorghe C, Coculescu E, et al. Oral leukoplakia–An update. Rom J Morphol Embryol. 2014;55(3):917-923.

[9] Wollina U, Verma SB, Ali FM, et al. Oral submucous fibrosis: an update. Clin Cosmet Investig Dermatol. 2015;8:193-204.

[10] Shih YH, Wang TH, Shieh TM, et al. Oral submucous fibrosis: a review on etiopathogenesis, diagnosis, and therapy. Int J Mol Sci. 2019;20(12):2940.

[11] Kaabi HH, Alsharif AM, Alzahrani FA, et al. Smokeless tobacco keratosis in oral mucosa with epithelial dysplasia: a case report. J Int Soc Prev Community Dent. 2021;11(1):106-110.

[12] Kaabi HH. Smokeless tobacco keratosis in oral mucosa with epithelial dysplasia: A case report. Medicine (Baltimore). 2024 Apr 12;103(15):e37771.

[13] Levesque JF, Harris MF, Russell G. Patient-centred access to health care: conceptualising access at the interface of health systems and populations. Int J Equity Health. 2013;12:18.

[14] ICANCARE. Innovative Cancer Care & Rehabilitation: Annual Report 2022. Haryana, India: ICANCARE Foundation; 2022.

[15] ICANCARE. “Sunday Lives” Awareness Campaigns: Impact Assessment 2021. Haryana, India: ICANCARE Foundation; 2021.

[16] Government of India. The Cigarettes and Other Tobacco Products Act (COTPA), 2003. New Delhi: Ministry of Health and Family Welfare; 2003.

[17] World Health Organization. WHO Framework Convention on Tobacco Control. Geneva: WHO; 2003.

[18] Reddy KS, Gupta PC, editors. Report on Tobacco Control in India. New Delhi: Ministry of Health and Family Welfare; 2004.

[19] International Labour Organization (ILO). Working conditions in brick kilns: A global review. Geneva: ILO; 2018.

[20] Neupane D, Jørs E, Brandt L. "Pesticide use and respiratory symptoms among farmers in Nepal." Int J Occup Environ Health. 2016;22(1):14-21.

[21] World Health Organization (WHO). Air pollution and occupational health risks in brick kilns. Geneva: WHO; 2020.

[22] Siddiqui AR, Lee K, Bennett D, et al. "Respiratory health and particulate matter exposure in brick kiln workers in Pakistan." Environ Health Perspect. 2019;127(3):037001.

[23] Balakrishnan K, Ghosh S, Ganguli B, et al. "State and national household concentrations of PM2.5 from solid cookfuel use: Results from measurements and modeling in India for estimation of the global burden of disease." Environ Health. 2013;12:77.

[24] Ahsan RM, Raihan MZ. "Occupational health hazards among brickfield workers in Bangladesh." J Health Pollut. 2017;7(16):78-85.

[25] International Labour Organization (ILO). Decent work in brick kilns: Policy recommendations. Geneva: ILO; 2019.

[26] Government of India. Occupational Safety, Health and Working Conditions Code, 2020. New Delhi: Ministry of Labour and Employment; 2020.

[27] Joshi SK, Dudani I. "Environmental health effects of brick kilns in Kathmandu valley." Kathmandu Univ Med J. 2008;6(1):3-11. PMID: 18604107.

[28] John RM, Sinha P, Munish VG, et al. "Tobacco use among brick kiln migrant workers in northern India." Tob Control. 2021;30(e1):e1-e8.

[29] World Health Organization (WHO). Tobacco cessation interventions for workers in hazardous industries. Geneva: WHO; 2021.

[30] Action Aid. Living in bondage: A study on bonded labour in brick kilns in India. New Delhi: ActionAid India; 2017..

.