



WORKPLACE-RELATED IMPACT OF TOBACCO USE IN INDIA: NARRATIVE REVIEW

Mansi Atri

Associate Professor, Department of Public Health Dentistry, ESIC Dental College and Hospital, Rohini, Delhi.

Dr Prachi Thakral

ABSTRACT

The employer's role is to safeguard the employee's health at the workplace. The article is an attempt to assess the impact and prevalence of tobacco use at workplaces in India. The tobacco epidemic is one of the biggest public health threats according to WHO. Its use in the workplace suggests employers' inefficiency in creating a safe working environment. There are various factors at the workplace responsible for increased use of tobacco products such as heavy workload, odd working hours, low pay, low education, and peer group pressure. All these suggest that stress-related job dissatisfaction and Effort-Reward Imbalance are some factors leading to the picking up of tobacco habits. It has been shown in various studies that nonusers are far more productive than users i.e., smokers cost around \$5816 more per year than non-smokers posing economical risks to employers. Such habits not only have economical risks but also health and environmental risks leading to tobacco-related menace. Precautionary steps can be taken to control this menace starting with amendments in labor law - 1948; ensuring effective guidelines for tobacco use in the workplace. Employers should take all necessary steps for creating a positive work environment such as organizing counselling and cessation programs, screening tests, posing restrictions, etc.

KEYWORDS : Tobacco, Workplace, Industry, Stress.

Tobacco is one of the biggest public health threats the world has ever faced, killing more than 8 million people in a year. There is no safe level of tobacco, all forms of tobacco are harmful. Cigarette smoking is the most common form along with bidi, roll your own, cigar, kreteks, pipe others are smokeless forms (such as khaini, gutka, Zardari etc.) According to GATS nationalized survey, India is the second largest consumer and producer (2016-2017). Most regions of the country have reported having a high (typically greater than 50%) rate of male tobacco use. Compared to metropolitan regions, it is used more frequently in rural areas. [1] In India, there are around 195 million individuals (154 million men and 41 million women) either smoking or chewing some form of tobacco.[2]

Tobacco use contributes to health-related risks and poverty by diverting the use of money from basic needs such as food and shelter to tobacco. India's tobacco problem is complex with large use of a variety of smoking and smokeless forms of tobacco. According to the GATS-2 survey, khaini is used for 10.4 crores, followed by bidi 7.2 crore adults [3]. According to research, just 3% of tobacco smokers who attempt to give up succeed. [4],[5] Because tobacco products are addictive, those who use them require assistance quitting. Therefore, there is a need for more conveniently available community-based tobacco cessation facilities.

Occupation plays a major role in the initiation and continuation of tobacco use. Tobacco in the workplace has been a significant cause of concern over the years. Workers exposed to smoke are susceptible to health risk and their productivity declines. According to workplace law, a safe work environment is essential for both employees and employers, regardless of the size of the company to increase productivity and ensure the quality of products and services provided by employees. While smoking is prohibited in India in public places and indoor workplaces there is no recognition of smokeless tobacco use in the workplace as per the cigarette and other Tobacco Products Act.

Occupation or employees in a workplace has been classified broadly as white-collar, blue-collar occupations, and service providers. The term blue collar refers to a classification of people, especially those in the workforce. They typically work in manual labor and are compensated by the hour or through piecework.

National Classification of Occupation was first introduced by the ministry of employment and labor government of India, later it was amended in the year 1997,2005 and 2015. According to the current classification, the 2015 occupation has been divided into 10 divisions.

The risk factors that include the increased consumption of tobacco are Lack of access to adequate health care.: it leads to a lack of awareness about various tobacco-related health problems.

A combination of a heavy workload, working at odd hours, low pay, monotonous nature of work, low educational attainment, and peer

group pressures cause them to pick up the tobacco habit.

NCO 2004 Divisions	Title	Skill Level
1	Legislators, Senior Officials, and Managers	Not Defined*
2	Professionals	IV
3	Associate Professionals	III
4	Clerks	II
5	Service Workers and Shop & Market Sales Workers	II
6	Skilled Agricultural and Fishery Workers	II
7	Craft and Related Trades Workers	II
8	Plant and Machine Operators and Assemblers	II
9	Elementary Occupations	I
X	Workers not Classified by Occupations	-

Work environment and its effects:

The environment of the workplace influences to a great extent the employee's **rate of error, efficiency, collaboration with their employees, absenteeism, innovativeness, and ultimately their retention.** The workplace environment in which employees operate determines whether or not such organizations will prosper or be a failure. Herzberg's two-factor principle and Effort – Reward imbalance model explains the effect of job dissatisfaction on an employee. According to Herzberg's two sectors, principal job satisfaction is influenced by motivator factors such as achievement, recognition, responsibility, advancement, and personal growth. Whereas job dissatisfaction is influenced by the hygiene conditions such as working environment, co-worker relations, policies, salary, etc. [10] The work environment is divided into a workplace environment or physical work environment and a work environment or psychic environment.[9] The work environment is all the conditions that occur related to work relationships, both relationships with superiors and subordinates and with colleagues. The work environment causes psychological and physiological effects which include quantitative overload, underload, lack of control, and social support.

Besides the work environment, there are other factors that influence the stress namely workload. Workload increases job stress and when stress increases it will cause an increase in tobacco usage.

Tobacco-associated health risks:

Various health risks are associated with tobacco use, including cardiovascular diseases, respiratory diseases, cancers, precancerous lesions, sexual dysfunction, and bone and muscle diseases, ultimately leading to death. In India, tobacco use is responsible for about 27% of all malignancies, including cancers of the mouth, lungs, larynx, bladder, liver, stomach, pancreas, and acute myeloid leukaemia. [12]

The use of smokeless tobacco is to blame for about 90% of mouth cancer cases in India [13]. Additionally, it has been discovered that Bidi and cigarette smokers pass away 6 to 10 years earlier than non-smokers [14]. In addition to the health hazards associated with tobacco use, it is estimated that secondhand smoke affects about 2 lakh people each year at work. In indoor workplaces, secondhand smoke is inhaled by 30.2% of adults.[15] A negative work environment is created by second-hand smoking, which also damages relationships and raises the risk of disease. Per gramme of particle matter, it is three to four times more hazardous than traditional tobacco smoke. In confined spaces, secondhand smoke is exposed to by about 21% of youth and by 11% of them at home.[16]

Third-hand smoking

The smoke residue that clings to materials such as curtains, air filters, fans, desks, and windows that can be recycled back into the air is known as thirdhand smoking. This increases the risk of lung cancer, and asthma, in non-smokers. It also affects the environment and air quality when it reacts with oxidants. The nicotine present in the tobacco with nitrous acid present in the environment forms NNK causing unpleasant odor. Increased tobacco by-products such as cotinine end up in many solid waste landfills. The post-consumer waste also causes public nuisance up to 2/3 of every smoked cigarette discarded onto the ground, leading to 34 to 68 million kg of waste product returning into the world each year which leads to contamination of groundwater, soil, and wildlife. Manufacturing, packing, and transportation of tobacco-related products also cause pollution.

Green tobacco sickness is also a health risk seen among the tobacco harvesters; it occurs due to nicotine toxicity as it gets absorbed through the skin. Symptoms include headache, weakness, giddiness, nausea and vomiting, abdominal pain, and breathlessness. The overall prevalence of green tobacco sickness is higher than 86.2% among Bidi tobacco cultivators.[17]

Economic impact of tobacco industry

Tobacco industry is a huge market in India. The tobacco business has made significant contributions to the economy through its employment creation in manufacturing and agriculture as well as its revenue production from exports and taxes. In 2009, India, the third-largest tobacco producer in the world, produced 620,000 metric tonnes (MT) of tobacco worth 987,513 international dollars. In 2009, India exported 230,804 tonnes of unprocessed tobacco for a total of \$748,553 (\$1000). A significant population is supported by the harvesting of tobacco; over 33 million people work in the industry, of which 3.5 million are in India. The full range of produced tobacco products are subject to excise duty, though cigarettes make up the majority of the total. Tobacco generated Rs. 81,820 million in economic output for India in 2000–01, or roughly 12% of all excise tax receipts.

Due to the sickness and mortality linked to the use of tobacco products, tobacco has significant direct and indirect costs on society. The Indian Council of Medical Research estimates that the entire costs associated with tobacco-related illnesses in 1999 were around Rs 277.6 billion, or US \$6.5 billion. Estimates for cancer were 350,000 rupees, coronary artery disease was 29,000 rupees, and chronic obstructive pulmonary disease was above 23,000 rupees. [34] Reddy and Gupta predicted a total expenditure of Rs 308.33 (\$6.6) billion for the three main tobacco-related disorders in the years 2002–2003. [8] According to John et al., the entire economic cost of tobacco usage in India in 2004 was estimated to be \$1.7 billion, or 16% more than the \$1.46 billion in excise tax receipts from all tobacco products in the fiscal year 2003–2004. Included in this are the direct medical expenses for treating disorders caused by tobacco use, which totaled \$285 million for smokeless tobacco and \$907 million for smoked tobacco, respectively. The value of caregiver expenses and lost wages as a result of illness were included in the indirect morbidity costs of smoking, which were also computed. For smoked tobacco, this came to \$398 million and for smokeless tobacco, \$104 million. the impact of tobacco control measures and the cost-effectiveness of tobacco control.

According to a survey on a pooled sample of all of India, a 10% increase in bidi costs might cause a 9.2% drop in rural bidi use and a 3.4% drop in rural cigarette usage. Young individuals and lower-income groups have been found to be the most price-responsive groups in studies measuring the price responsiveness of cigarette demand to cigarette pricing. According to a study from Vietnam, rising cigarette pricing may merely tempt users to switch to other tobacco products rather than actually encouraging them to quit. [41] However, it is anticipated that higher

tobacco taxes will reduce tobacco use by preventing start, increasing the likelihood that current smokers will quit, reducing the likelihood that former smokers will relapse, and reducing consumption among current smokers. It is obvious that considerable increases in tobacco taxes will greatly reduce tobacco use in low- and middle-income countries; as a result, this strategy may be the most successful for reducing tobacco use in India. To study the cost-effectiveness of various tobacco control strategies, further research—both urban and rural—is unquestionably necessary in the Indian context. Further study would be required to determine the potential effects of tobacco taxation on tobacco smuggling, the substitution of other rustic tobacco products, and indigenous local tobacco production after taxation in the context of numerous emerging economies.

According to numerous research, boosting cigarette taxes causes a reduction in consumption that is offset by higher tobacco taxes. By lowering tobacco usage, higher tobacco taxes benefit public health, increase a nation's revenue, and lower healthcare costs associated with cigarette-related disorders. According to Indian projections, tax-induced price increases of 52.8% for bidis and 176% for cigarettes would result in lower spending on tobacco-related public health expenses as well as an increase in the government's tax revenue (estimated to be Rs 36.9 billion or US\$ 0.8 billion and Rs 146.3 billion or US\$ 3.1 billion, respectively).

Tobacco cessation at the workplace

Providing employees with resources to help them quit smoking has been shown to increase both health and productivity in the workplace. Studies show that smokers are less productive at work because of their habit, are more likely to sustain injuries on the job, and are less likely to take sick days due to illnesses caused by their habit.

This article has explained how the workplace affects the use of tobacco use. The work-related tobacco use can be curtailed if employers are serious about reinforcing anti-tobacco policies not only in smoking form but also in a smokeless form. Along with policy implementation awareness about the hazardous effects of tobacco should also be done through the organization of periodic camps. The employer should pay attention to working conditions, pay, hours of work, stress, etc. Special preventive programs including Tobacco cessation Counselling (TCC) and early detection of diseases; targeting industrial workers should also be organized by the government periodically. Major changes in the individual will be seen after educating them as well as their family members about tobacco-related oral lesions and their impact on health, oral health, and lifestyle.

REFERENCES:

- Bhonsle RB, Murti PR, Gupta PC. Tobacco habits in India. In: Gupta PC, Hammer JE, Murty PR, editors. Control of tobacco-related cancers and other diseases. Proceedings of an International Symposium, 15-19 January 1990. Mumbai: TIFR, Oxford University Press; 1992. p. 25-46.
- Rani M, Bonu S, Jha P, Nguyen SN, Jamjoum L. Tobacco use in India: Prevalence and predictors of smoking and chewing in a national cross sectional household survey. *Tob Control* 2003;12:e4.
- [https://nhm.gov.in/NTCP/Surveys-Reports-Publications/GATS-2-Highlights-\(National-level\).pdf](https://nhm.gov.in/NTCP/Surveys-Reports-Publications/GATS-2-Highlights-(National-level).pdf)
- Fiore MC, Bailey WC, Cohen SJ, Dorfman SF, Goldstein MG, Gritz FR. Treating tobacco use and dependence: Clinical practice guideline. Rockville, MD: US Department of Health and Human Services, Public Health Service; 2000.
- Hughes JR, Gulliver SB, Fenwick JW, Valliere WA, Cruser K, Pepper S, et al. Smoking cessation among self-quitters. *Health Psychol* 1992;11:331-331.
- Oswal KC, Raute LJ, Pednekar MS, Gupta PC. Are current tobacco pictorial warnings in India effective? *Asian Pac J Cancer Prev* 2011;12:121-4
- Occupational gradients in smoking behavior and exposure to workplace environmental tobacco smoke: The Multi-Ethnic Study of Atherosclerosis (MESA) Kaori Fujishiro, PhD, Karen D Hinckley Stukovsky, MS, [..], and Cecil Burchfiel, PhD
- Perceived stress and smoking-related behaviors and symptomatology in male and female smokers Michael H. Lawless, B.S., Katherine A. Harrison, M.P.H., [..], and Sharon S. Allen, M.D., Ph.D.
- Sedarmayanti, Manajemen Sumber Daya Manusia, Reformasi Birokrasi dan Manajemen Pegawai Negri Sipil (cetakan kelima). Bandung: PT Refika Aditama, 2011.
- <https://courses.lumenlearning.com/wm-organizationalbehavior/chapter/herzbergs-two-factor-theory/>
- Psychosocial Work Conditions - Cardiovascular Disease, Perceptions and Reactive Behaviour December 2014; Authors: Mia Söderberg
- National Centre for Disease Informatics and Research: Findings from the National Cancer Registry Programme Report (2012-2016). Bengaluru, India: National Cancer Registry Programme (NCRP-ICMR) 2020.
- Gupta PC, et al. (eds.). *Smokeless Tobacco and Public Health in India*. Ministry of Health and Family Welfare, Government of India; New Delhi: 2016.
- Jha P et al. A Nationally Representative Case-Control Study of Smoking and Death in India. *The New England Journal of Medicine*. 2008;358:1-11.
- Global Burden of Disease (GBD) 2019. Seattle, WA: Institute for Health Metrics and Evaluation (IHME), University of Washington; 2021.
- Siddiqi, K., Husain, S., Vidyasagar, A. et al. Global burden of disease due to smokeless tobacco consumption in adults: an updated analysis of data from 127 countries. *BMC Med* 18, 222 (2020)
- Report of tobacco control in India: MOHFW & WHO; K. Srinath Reddy