

PREVALENCE OF TOBACCO USE IN INDIA

Dr. Shailja Chatterjee

M.D.S., Ph.D.

Consultant Oral and Maxillofacial Pathology, Oral Cancer

Screening and Dental Care Centre, Saharanpur, (U.P.)

Professor and Head, Department of Oral and Maxillofacial

Pathology, Yamuna Institute of Dental Sciences and research,

Yamuna Nagar (Haryana).

Across the globe, smoked and smokeless tobacco consumption constitutes a significant health threat. Tobacco is a leading cause of 8 million deaths each year. ¹ Over 2/3rds deaths in developing nations have been attributed to non-communicable diseases of which deaths due to tobacco use is preventable factor. ^{2,3} Tobacco, alcohol along with smoking has been associated with impairment of cognition among aging individuals. Tobacco is a readily and legally available and can be easily accessed. ⁴ Numerous policies to regulate use of tobacco all around the world have been put into place. In spite of this, no reversal in consumption of tobacco consumption has been observed. ² India has ranked 3rd in tobacco agriculture out of which half of tobacco produced is consumed within the country. ⁶

Global Adult Tobacco Survey (GATS) constitutes nationwide surveys by means of standard protocol in various countries. This survey uses monitoring as well as tracking of tobacco (both smoked as well as smokeless forms) all across the world. ⁷

Global Adult Tobacco Survey (GATS) constitutes nationwide surveys by means of a standard protocol in various countries. This survey uses monitoring as well as tracking of tobacco (both smoked as well as smokeless forms) all across the world. ⁷

Prevalence of tobacco use in any form has been found to increase in developing nations which including India. ⁸ As per GATS reports (2016-17), approximately 30% adult Indians use any form of tobacco. ⁹ It has been estimated that on average, twenty million adult individuals, of which 29.6% were males and 12.8% were females, consume smokeless tobacco in any form. ¹⁰

21.4% adults consume smokeless types of tobacco, while 10.7% have a habit of smoking. However, smokeless tobacco use has also been reported among women, children, as well as teenagers. ¹¹ This is partly attributed to the misconception that smokeless tobacco is relatively safe when compared to smoking. ¹²



Kulothangan et al (2024) in their meta-analysis reported that tobacco in smoked as well as smokefree form has been linked with significant cancer risk among Indians whereas site-specific analysis demonstrated greater risk of respiratory system and head and neck carcinoma development.¹³

Addiction due to tobacco

Nicotine is the main constituent responsible for addiction of tobacco. Nicotine functions by binding with nicotine cholinergic receptors, thereby causing release of neurotransmitters such as- Dopamine, g-aminobutyric acid, glutamate which are responsible for nicotine dependence. Release of corticotrophin-releasing hormone contributes towards withdrawal symptoms. Dependence on Nicotine is heritable as evident by nicotinic receptor subtypes and genes.

Primary metabolism of nicotine is regulated by CYP2A6 which is responsible for variations in metabolic rate contributing to dependence on tobacco, treatment response towards tobacco cessation and risk of lung cancers.

Pharmacotherapeutic methods to treat addiction of tobacco include- replacement of nicotine, bupropion or varenicline.¹⁴

References

- 1.Singh PK, Yadav A, Lal P, Sinha DN, Gupta PC, Swasticharan L et al. dual burden of smoked and smokeless tobacco Use in India, 2009–2017: a repeated crosssectional analysis based on global adult tobacco survey. *Nicotine Tobacco Res* 2020;22:2196–202.
- 2.Islam MS, Saif-Ur-Rahman KM, Bulbul MdMI, Singh D. Prevalence and factors associated with tobacco use among men in India: findings from a nationally representative data. *Environ Health Prev Med* 2020;25:62–7.
- 3.Panda B, Rout A, Pati S, Chauhan AS, Tripathy A, Shrivastava R et al.
- 4.Tobacco control law enforcement and compliance in Odisha, India—Implications for tobacco control policy and practice. *Asian Pacific J Cancer Prevent* 2012;13:4631–7.
- 5.Bhawna G. Burden of smoked and smokeless tobacco consumption in India—Results from the global adult tobacco survey India (GATS-India) 2009–2010. *Asian Pacific J Cancer Prevent*. 2013; 14:3323–9.
- 6.Chandrupatla SG, Tavares M, Natto ZS. Tobacco use and effects of professional advice on smoking cessation among Youth in India. *Asian Pac J Cancer Prev* 2017;18:1861–7.
- 7.World Health Organization. Global Adult Tobacco Survey India 2016–17. (2019). Available online at: <https://ntcp.nhp.gov.in/assets/document/surveys-reportspublications/Global-Adult-Tobacco-Survey-Second-Round-India-2016-2017.pdf>
- 8.Hussain MA, Pati S, Swain S, Prusty M, Kadam S, Nayak S. Pattern and trends of cancer in Odisha, India: a retrospective study. *Asian Pacific J Cancer Prevent* 2012;13:6333–6.
- 9.Singh A, Arora M, Bentley R, Spittal MJ, Do LG, Grills N et al. Geographic variation in tobacco use in India: a population-based multilevel cross-sectional study. *BMJ Open* 2020;10:e033178–85.

