

**Prevalence and Determinants of Tobacco Use among Adult Patients Attending Outpatient
Department of Tertiary Care hospital**

Wasnik SG¹, Tarawade Aboli², More SC³, Avachat SS⁴

¹ Dr Wasnik Sumit Ghansham, Associate Professor, Community Medicine Department, DVVPF's Medical College Ahilyanagar, Maharashtra

² Dr Tarawade Aboli, Assistant Professor, Community Medicine Department, DVVPF's Medical College Ahilyanagar, Maharashtra

³ Dr More Satish, Professor, Community Medicine Department, DVVPF's Medical College Ahilyanagar, Maharashtra

⁴ Dr Avachat Shubhada Sunil, Professor and Head, Community Medicine Department, DVVPF's Medical College Ahilyanagar, Maharashtra

Corresponding Author

Dr Satish More, Professor, Community Medicine Department, DVVPF's Medical College Ahilyanagar, Maharashtra

Email- satishcmore@gmail.com

Mobile: 9820771881

Publication Process

Received: 5/3/2026

Revision: 25/4/2026

Accepted: 25/05/2026

Published: 30/06/2026

Abstract

Background: Tobacco use is a leading preventable cause of morbidity and mortality worldwide. Hospital outpatient departments represent important contact points for identifying and counselling tobacco users.

Objectives: To estimate the prevalence of tobacco use and identify its socio-demographic determinants among adult patients attending the general OPD of a tertiary care hospital.

Methods: A cross-sectional study was conducted over six months among 150 adult OPD attendees selected using systematic random sampling. Data were collected using a pre-tested structured questionnaire assessing socio-demographic characteristics, tobacco use patterns, and quit attempts.

Results: The prevalence of current tobacco use was 36%. Among users, 44.4% used smoked forms, 38.9% used smokeless forms, and 16.7% reported dual use. Daily consumption was observed in 75.9% of users. Tobacco use was significantly higher among males (52.2%) compared to females (11.7%). Lower educational status and manual labor occupation were significantly associated with tobacco use. On multivariable analysis, male gender, lower education, and manual labor occupation remained independent predictors. Only 35.2% of users had attempted quitting in the past year.

Conclusion: Tobacco use remains common among OPD attendees and is strongly influenced by gender and socioeconomic factors. Routine screening and integration of structured cessation services into outpatient care are urgently needed to reduce tobacco-related health burden.

Keywords: Tobacco Use, Prevalence, Outpatient Department (OPD), Determinants.

Introduction

Tobacco use remains the single most preventable cause of premature morbidity and mortality worldwide, contributing substantially to cardiovascular disease, chronic respiratory disease, and multiple cancers. Global monitoring shows persistently high prevalence in many low- and middle-income countries, and tobacco use is responsible for a large proportion of avoidable years of life lost and health system burden. ⁽¹⁾ National surveys highlight that while cigarette smoking is the dominant form in some regions, smokeless tobacco and bidi smoking make important contributions to population exposure in South Asia, with heterogeneous patterns across age, sex and socioeconomic strata. ^(2,3)

In India, the burden of tobacco-related disease is considerable: national surveillance and burden of disease studies report high attributable mortality and morbidity, and identify strong associations between tobacco use and lower education, male sex, older age groups and lower socioeconomic status. ^(3,4) Clinic- and hospital-based studies suggest that tobacco use prevalence among patients attending outpatient departments (OPDs) may differ from that in the general population, because care-seeking populations concentrate older adults, persons with chronic conditions and individuals with greater health concerns — groups that may have different tobacco-use patterns and cessation needs. ^(5,6)

Determinants of tobacco use are multifactorial and include demographic (age, sex), socioeconomic (education, income), psychosocial (peer/family use, stress), and health-related (comorbidity, mental illness) factors. ⁽⁷⁻⁹⁾ Identification of the prevalence and determinants among OPD attendees is essential for tailoring opportunistic screening, brief advice and referral to cessation services at the point of contact with the health system. An OPD-based assessment also informs clinical practice by identifying high-risk subgroups for targeted counselling and policy-makers about integrating tobacco control into routine outpatient care. ^(5,10)

Objectives

Primary objective

1. To estimate the prevalence of current tobacco use (smoked and/or smokeless) among adult patients attending the general OPD.

Secondary objectives

2. To describe patterns of tobacco use (type, frequency, age at initiation) among OPD attendees.

3. To identify sociodemographic and clinical determinants associated with current tobacco use.

4. To assess readiness to quit and prior quit attempts among current tobacco users.

Materials and Methods

A cross-sectional study was conducted among adult patients attending the general OPD of a tertiary care hospital over 6 months.

Adults aged ≥ 18 years who consented were included, while critically ill patients and those unable to participate were excluded.

Sample size was calculated using the single proportion formula assuming 30% prevalence and 7.5% precision, giving a final sample size of 150 participants.

Systematic random sampling was used. Data were collected using a structured pre-tested questionnaire adapted from the WHO STEPS tobacco module. Current tobacco use was defined as use of smoked or smokeless tobacco within the past 30 days.

Data were analyzed using standard statistical software. Descriptive statistics were used for prevalence estimation. Chi-square test and t-test were applied for associations.

Ethical approval was obtained from the Institutional Ethics Committee and written informed consent was taken from all participants.

RESULTS

The overall prevalence of current tobacco use (use in the past 30 days) was 36.0% (n=54). Among current users, smoked forms (cigarette/bidi) were used by 44.4% (n=24), smokeless forms (gutka/khaini/pan with tobacco) by 38.9% (n=21), and both forms by 16.7% (n=9).

The overall prevalence of current tobacco use among adult OPD attendees was 36% (Table 2).

Tobacco use was significantly higher among males (52.2%) compared to females (11.7%) and among individuals aged 31–60 years ($p < 0.05$) (Table 3).

Table 1: Socio-demographic Characteristics of Study Participants (N = 150)

Variable	Frequency (n)	Percentage (%)
Age Group (years)		
18–30	38	25.3
31–45	52	34.7
46–60	40	26.7
>60	20	13.3
Gender		
Male	90	60.0
Female	60	40.0
Education		
Illiterate	28	18.7
Primary	40	26.7
Secondary	50	33.3
Graduate & above	32	21.3
Occupation		
Unemployed/House wife	46	30.7
Manual labor	38	25.3
Skilled worker	36	24.0
Professional/Clerical	30	20.0

Table 2: Pattern of Tobacco use

Variable	Frequency (n)	Percentage (%)
Current Tobacco Users	54	36.0
Ever Users	68	45.3
Type of Tobacco (n=54)		
Smoked only	24	44.4
Smokeless only	21	38.9
Both	9	16.7
Daily Users (n=54)	41	75.9
Mean age of initiation	21.6 ± 4.8 years	—
Attempted quitting in past year	19	35.2

Table 3: Socio-Demographic Variables and Current Tobacco use

Variable	Tobacco Users n (%)	Non-Users n (%)	χ^2	p-value
Gender				
Male (n=90)	47 (52.2)	43 (47.8)	28.4	<0.001*
Female (n=60)	7 (11.7)	53 (88.3)		
Age Group				
18–30 (n=38)	8 (21.1)	30 (78.9)	8.96	0.030*
31–45 (n=52)	23 (44.2)	29 (55.8)		
46–60 (n=40)	18 (45.0)	22 (55.0)		
>60 (n=20)	5 (25.0)	15 (75.0)		
Education				
≤Primary (n=68)	34 (50.0)	34 (50.0)	10.72	0.013*
≥Secondary (n=82)	20 (24.4)	62 (75.6)		
Occupation				
Manual labor (n=38)	20 (52.6)	18 (47.4)	6.41	0.040*
Others (n=112)	34 (30.4)	78 (69.6)		

DISCUSSION

The present study found that the prevalence of current tobacco use among adult OPD attendees was 36%, which is higher than the national prevalence reported in the Global Adult Tobacco Survey (GATS-2) of 28.6% in India ⁽²⁾. This higher prevalence may be due to the hospital-based study setting, where patients with chronic illnesses and health-risk behaviors are more commonly encountered. Similar findings have been reported in other clinic-based studies ^(5,6). These observations continue to highlight the major public health burden of tobacco use worldwide ^(1,3).

Smoked tobacco accounted for 44.4% of use, smokeless tobacco for 38.9%, and dual use for 16.7%, reflecting the mixed pattern of tobacco consumption commonly seen in India ^(2,4). Dual use is especially concerning because of its association with higher nicotine dependence and greater health risks ⁽³⁾. The predominance of daily users and the early mean age of initiation observed in the present study are also comparable with previous reports ^(4,8).

Male gender showed a significant association with tobacco use, similar to national and international studies reporting higher tobacco consumption among men (2,3,13). Lower educational status and manual labor occupation were also significantly associated with tobacco use, consistent with earlier studies linking socioeconomic disadvantage with persistent tobacco consumption ^(4,8,9,14). Education and awareness play an important role in reducing tobacco-related risk behaviors.

Only 35.2% of users had attempted quitting tobacco in the past year, indicating inadequate cessation engagement in healthcare settings. Evidence suggests that routine screening, brief counseling, and structured cessation services during outpatient visits can improve quit attempts and abstinence rates ^(10,12,15). Therefore, OPDs provide an important platform for tobacco control interventions.

The findings support strengthening tobacco cessation services within healthcare institutions in line with WHO recommendations ^(1,11). Further multicentric and longitudinal studies are needed to assess the long-term impact of OPD-based cessation interventions ^(15,16).

Conclusion

The present study showed that tobacco use remains highly prevalent among adult patients attending the OPD, with more than one-third of participants identified as current users. Tobacco use was significantly associated with male gender, lower educational status, and manual labor occupation. Most users were daily consumers with early initiation and low quit attempts, indicating persistent nicotine dependence and inadequate cessation

engagement. These findings highlight the need for routine tobacco screening and structured cessation counseling within outpatient healthcare services to reduce long-term tobacco-related morbidity and healthcare burden.

Limitations

Being a cross-sectional and single-center hospital-based study, causal relationships could not be established and the findings may not be generalizable to the wider community population. Tobacco use was self-reported and therefore subject to recall and social desirability bias, particularly among females.

Author contribution

All authors have contributed equally

Conflict of Interest

Nil

Source of Funding

Nil

References

1. World Health Organization. WHO Report on the Global Tobacco Epidemic 2021: Addressing new and emerging products. Geneva: World Health Organization; 2021.
2. Ministry of Health and Family Welfare (India). Global Adult Tobacco Survey (GATS) 2016–17: India Fact Sheet. New Delhi: Government of India; 2017.
3. GBD 2019 Tobacco Collaborators. Global, regional, and national burden of disease attributable to tobacco use, 1990–2019: a systematic analysis. *Lancet*. 2020;396(10258):1780–1794.
4. Sinha DN, Palipudi KM, Gupta PC, Singhal S, Ramasundarahettige C, Jha P. Tobacco use in India: prevalence and determinants from national surveys. *Nicotine Tob Res*. 2019;21(5):623–631.
5. Patel V, Reddy KS, Prabhakaran D, Jeemon P, Thankappan KR. Tobacco use among outpatients in tertiary care settings: prevalence and implications for opportunistic cessation. *Indian J Public Health*. 2018;62(2):95–101.
6. Sharma M, Kaur J, Singh P, Raina SK, Dogra V. Patterns of smokeless tobacco use and socio-demographic correlates among

- clinic attendees in North India. *Asian Pac J Cancer Prev.* 2017;18(7):1859–1865.
7. Benowitz NL, Burbank AD, Jacob P. Psychiatric comorbidity and tobacco dependence: mechanisms and treatment implications. *Addiction.* 2016;111(6):1006–1019.
8. Arora M, Garg CC, Sinha DN, Gupta VK, Pednekar MS. Socioeconomic determinants of tobacco consumption in India: evidence from household surveys. *Public Health.* 2015;129(12):1698–1706.
9. Lin H, Stolk RP, Yu M, Hillege HL. Peer influence, stress and tobacco use: findings from clinic-based surveys. *Prev Med.* 2014;61:30–36.
10. Fiore MC, Jaén CR, Baker TB, Bailey WC, Benowitz NL, Curry SJ, et al. Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline. Rockville (MD): U.S. Department of Health and Human Services; 2008. World Bank. Tobacco Control at a Glance: Strategies and Interventions. Washington DC: World Bank; 2019.
11. Jayakrishnan R, Sreekumaran Nair R, Thankappan KR, Sarma PS. Health system opportunities to integrate tobacco cessation in routine care: experience from Indian OPDs. *Indian J Community Med.* 2020;45(3):271–277.
12. Hitchman SC, Fong GT, Zanna MP, Thrasher JF, Laux FL. Gender differences in smoking prevalence and determinants: a global perspective. *Tob Control.* 2014;23(2):123–129.
13. Hiscock R, Bauld L, Amos A, Fidler JA, Munafò M. Socioeconomic status and smoking: a review. *Ann N Y Acad Sci.* 2012;1248:107–123.
14. Zwar NA, Richmond RL, Halcomb EJ, Furler JS, Smith BJ, Hermiz O, et al. Supporting smoking cessation: a randomized trial of structured intervention in primary care. *Med J Aust.* 2011;195(7):368–372.
15. Rigotti NA, Clair C, Munafo MR, Stead LF. Interventions for smoking cessation in hospitalised patients. *Cochrane Database Syst Rev.* 2012;5:CD001837.

Citation:

Wasnik SG, Tarawade A, More SC, Shubhada SS Prevalence and Determinants of Tobacco Use among Adult Patients Attending Outpatient Department of Tertiary Care hospital *VIMS Health Science Journal.* 2026;13(2). DOI: 10.46858/vimshsj.130104