Section: Community Medicine

Original Research Article

PREVALENCE OF TOBACCO QUITTING ATTEMPTS & FACTORS ASSOCIATED WITH IT AMONG TOBACCO USERS IN PRIMARY HEALTH CENTRE, RAICHUR, KARNATAKA – A COSS-SECTIONAL STUDY

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Received : 15/09/2025
Received in revised form : 01/11/2025
Accepted : 17/11/2025

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DOI:10.70034/ijmedph.2025.4.264

Source of Support: Nil,
Conflict of Interest: Nonedeclared

Int J Med Pub Health
2025; 15 (4); 1475-1480

ABSTRACT

Background: Tobacco use remains a major public health challenge in India, contributing significantly to the burden of non-communicable diseases. While cessation is the primary care in reducing health risks, quitting is often hindered by nicotine dependence, socio-cultural factors, and limited access to cessation support. Identifying data on region-specific quitting behaviours and barriers are essential to strengthen target intervention. **Objectives:** 1. To assess the prevalence of tobacco quitting attempts among current tobacco users in Primary health centre. 2. To identify perceived obstacles and barriers that hinder successful tobacco cessation and factors associated with quit attempts of tobacco usage.

Materials and Methods: A community-based cross-sectional study was conducted among adult tobacco users in Primary Health Centre, Raichur. The study included adult Male and Female tobacco users (≥18 years) residing in Primary Health Centre for at least past six months. Data entered in MS Excel and analysed using CDC,s Epi Infor Version 6. Descriptive statistics were used to summarize findings, and associations between quitting behaviour and socio-demographic variables were analysed using Chi-square tests.

Results: Among the study participants (n =128), 45.3% of them plan to quit tobacco within the next six months. Quitting attempts was significantly associated with Gender, Knowledge regarding health problems on usage of tobacco and years of tobacco usage ($p < 0.05$).

Conclusions: A considerable proportion of tobacco users expressed non-willingness to quit because of multiple barriers which hinder cessation efforts. Strengthening locally accessible cessation services, improving awareness, and providing behavioural and pharmacological support could enhance quit success rates.

Keywords: Quitting attempts, Tobacco usage, Tobacco cessation, Cessation barrier.

INTRODUCTION

Every year, tobacco smoking causes approximately 8 million deaths, including 1.3 million from second hand smoke exposure, making it one of the world's major preventable causes of morbidity and mortality.[1,2] It is a significant risk factor most Non-communicable diseases like cancer, heart disease, and long-term respiratory conditions.[3] Both smoking and smokeless tobacco are widely used in India, the country with the second-highest tobacco consumption rate.[4] The Global Adult Tobacco Survey (GATS-2, 2016–17) found that 266.8 million Indian adults, or 28.6% of the population, use tobacco in some capacity.[5]

Despite the fact that quitting tobacco which is the primary care in drastically lowering health risks, nicotine dependency, psychological addiction, sociocultural acceptance, and a lack of resources make quitting difficult.[6,7] Before attaining long-term sobriety, the majority of users need to make several efforts to quit.[8] Withdrawal symptoms, a lack of knowledge about cessation techniques, peer pressure, and insufficient access to qualified medical personnel and medication are common obstacles.[9,10]

Success requires a well-organized quitting strategy that is customized and should be primary care to each person's needs and based on prior cessation experiences[11]. However, due to variations in socioeconomic circumstances, cultural customs, and the accessibility of health services, quitting behaviours and perceived barriers frequently fluctuate among regions.[12]

In smaller urban settings, such as Raichur, Karnataka, where socio-cultural norms, economic factors, and healthcare access patterns may differ from larger metropolitan areas, there is a lack of literature in evaluating quitting plans, prior cessation attempts, and perceived barriers among tobacco users, despite national tobacco control programs. Understanding and developing locally relevant cessation therapies requires addressing this evidence gap. In order to guide focused initiatives to minimize tobacco-related morbidity and mortality in the Raichur community, this cross-sectional study intends to assess the prevalence of tobacco quitting attempts among current tobacco users in Primary health centre & to identify perceived obstacles, barriers & factors associated that hinder successful tobacco cessation.

MATERIALS AND METHODS

Study Design and Setting

A community-based cross-sectional study was conducted in Primary Health centre (Singanodi) attached to Navodaya Medical College Raichur city, Karnataka, India, from April 2025 to June 2025.

Study Population

The study included adult Male and Female tobacco users (≥18 years) residing in primary Health Centre for at least past six months. Everyone who uses tobacco, including those thinking about quitting has tried to stop or has tried and failed to do so was eligible for the study. Smokers, chewers, cigars and who uses tobacco in any form were all considered tobacco users.

Inclusion Criteria

- Current tobacco users (smoked, smokeless, or dual use).
- Willing to provide informed consent.

Exclusion Criteria

- Former tobacco users who had quit for more than one year.
- Individuals with severe illness or cognitive impairment preventing participation.

Sample Size and Sampling Technique

According to the Adult Tobacco Survey 2 (2016-2017) shows a relative reduction in prevalence of current tobacco use.[5]

The sample size was calculated using the formula:

$$n=\frac{Z^2 \cdot p \cdot q}{d^2}$$

Where:

- Z = 1.96 for 95% confidence level
- p = estimated prevalence of quit attempts among tobacco users from previous studies
- q = 1 – p
- d = allowable error (5%)

This yielded a sample size of n = 115 With 10% attrition rate, Sample size is rounded to 128.

Participants were selected by systematic random sampling. In the field practice area, every 5th house is selected for the study. If the study participants from that house doesn't fit the inclusion criteria, the next house was selected. This was repeated till sample size was met.

Data Collection Tool

A pre-tested, semi-structured questionnaire was developed based on literature review. The questionnaire consisted of four sections:

1. Socio-demographic details (age, gen Global adult Tder, education, occupation, income,).
2. Tobacco use history (type, age of starting, Reasons to Start, duration, frequency).
3. Quitting plans (thoughts of quitting, advice to quit, quit attempts)
4. Perceived obstacles to cessation (withdrawal symptoms, peer influence, lack of awareness, access to cessation services, awareness regarding cessation centres).

Data Collection Procedure

Face-to-face interviews with prior consent was conducted among participants, ensuring privacy. Written informed consent was obtained before data collection. The questionnaire was administered in the local language (Kannada), and responses were recorded on paper forms and later entered into MS Excel.

Data Analysis

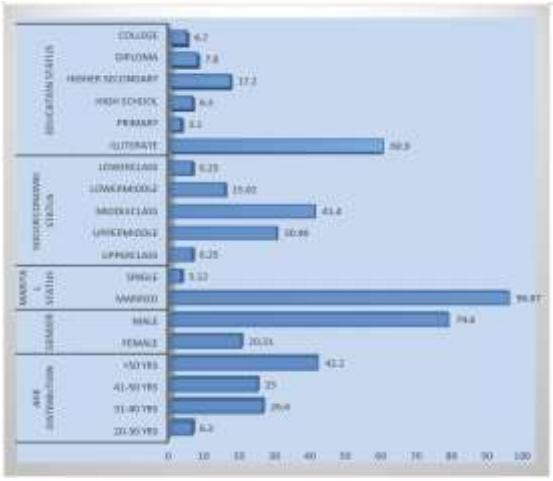
Data were entered in Microsoft Excel and analyzed using SPSS. Descriptive statistics (frequency, percentage) were used to summarize the data. The Chi-square test was applied to determine associations between quitting attempts and socio-demographic variables, factors associated with quit attempts. A p-value of <0.05 was considered statistically significant.

Ethical Considerations

Ethical clearance was obtained from the Institutional Ethics Committee of Navodaya Medical College Hospital Research Centre Raichur.

RESULTS

In the present study 128 study subjects were included among them around 42.2% of them were >50 years followed by 31-40 years (26.6%), out of 128 subjects 79.6% of them were males and 20.3% were females and most of them 96.87% of them were married. Based on modified B G Prasad classification 41.4% of them belonged to middle class, 30.4% were upper middle class, most of them 60.9% were illiterate and only 17.2% completed higher secondary.



Graph 1: Demographic profile of Tobacco users

Table 1: Determinants related to usage of tobacco

Determinants		Frequency (%)
Type of product	Smoking form	64(50)
	smokeless form	62 (48.4)
	Both	02(1.6)
Age of usage	<15 yrs	12(9.4)
	15-25 yrs	74(57.8)
	25-40 yrs	40(31.3)
	>40 yrs	02(1.6)
Reason to start tobacco usage	Wanted to try	28(21.9)
	Influence of friends	78(60.9)
	Considered manly and matured	08(6.3)
	To feel high	02(1.6)
	Combat loneliness	04(3.1)
	To socialize	08(6.3)
Knowledge on health problems caused due to tobacco usage	Don't know	02(1.6)
	Lung cancer	25(19.5)
	Respiratory disease	42(32.8)
	Oral cancer	37(28.9)
	Heart disease	16(12.5)
	Stroke	06(4.7)
Advised to quit	Yes	66(51.6)
Reasons for not able to quit	Started to have withdrawal symptoms	76(59.4)
	Could not withstand >few hours	28(21.9)
	Felt uncomfortable	18(14.1)
	Could not concentrate	6(4.7)

Determinants related to usage of tobacco are depicted in Table 1, 64 (50%) of them uses smoking form of tobacco**,** 62 (48.4%) of them uses smokeless form and 02(1.6%) uses both the form of tobacco. There were around 74(57.8%) of them who started using tobacco from 15- 25 years of age, followed by 40(31.3%) who started at the age of 25-40 years. When asked about the reason to use tobacco, 78(60.9%) of them replied to it as influence of friends, 28(21.9%) of them wanted to just try it, 08(6.3%) of them wanted to feel high and to socialize. Almost every user of tobacco knew the harmful effects of its usage among which 42(32.8%) knew it could result in some form of respiratory problems, 37(28.9%) of them replied to as oral cancer and 25(19.5%) knew it could result in lung cancer. Around 66(51.6%) of them were advised to quit by the health worker and asked why they could not quit despite advising, 76(59.4%) of them started to have withdrawal symptoms when they started to quit, 28(21.9%) of them could not withstand for few hours after quitting.

Table 2: Determinants of Quitting attempts

Had anytime tried to quit (in the last 6 months)	
Yes	58(45.3)
No	70(54.7)
Stopped using tobacco (in the last 6 months)	
No	74(57.8)
2 days	14(10.9)
3-7 days	22(17.2)
7 days-1 month	18(14.1)
Difficulties faced while quitting	

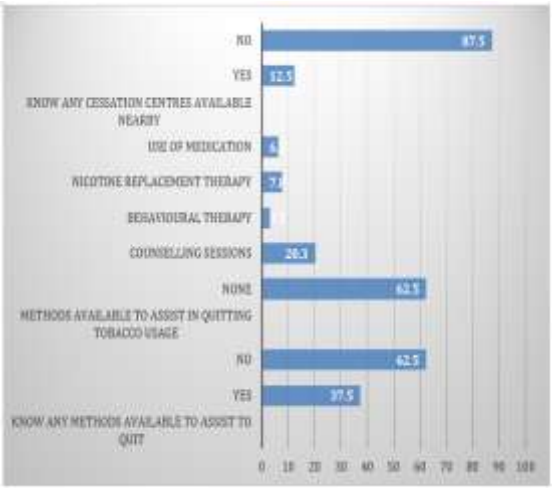
None	74(57.8)
Withdrawal symptoms	24(18.8)
Tempted when seeing others use	18(14.1)
Stressed	12(9.4)
Reasons to restart	
None	74(57.8)
Withdrawal symptoms	26(20.3)
Stress	16(12.5)
Work pressure	10(7.8)
To socialize	2(1.6)

Table 2 depicts determinants related to quitting attempts, around 58(45.3%) of them tried quitting one or the another time from the past six months, 74(57.8%) of them could not stop using tobacco at any point of time from the past six months whereas 22(17.2%) of them stopped using it for just 3-7 days and 18(14.1%) of them for almost a month.

Table 3: Factors associated with attempts to quit tobacco usage

Factors		Quit attempts		Total	Chi Square	p Value
		Yes	No			
Age Group (Yrs)	20-30	02(3.4)	06(8.6)	8	2.87	0.412
	31-40	18(31.0)	16(22.9)	34		
	41-50	16(27.6)	16(22.9)	32		
	>50	22(37.9)	32(45.7)	54		
Gender	Female	06(10.3)	20(28.6)	26	6.51	0.011
	Male	52(89.7)	50(71.4)	102		
Socioeconomic status	Upper class	04(6.9)	04(5.7)	8	2.997	0.558
	Upper Middle class	15(25.9)	24(34.3)	39		
	Middle class	27(46.6)	26(37.1)	53		
	Lower Middle class	10(50.0)	10(50.0)	20		
	Lower class	02(3.4)	06(8.6)	8		
Knowledge regarding health problems on usage of tobacco	None	00(0.0)	02(2.9)	2	15.342	0.009
	Lung cancer	16(27.6)	09(12.9)	25		
	Respiratory disease	20(34.5)	22(31.4)	42		
	Oral cancer	18(31.0)	19(27.1)	37		
	Heart disease	01(1.7)	15(21.4)	16		
	Stroke	03(5.2)	03(4.3)	6		
Years of usage	2 Years	02(3.4)	02(2.9)	4	8.864	0.031
	2-5 Years	14(24.1)	12(46.2)	26		
	5-10 Years	12(20.7)	32(45.7)	44		
	>10 Years	30(51.7)	24(34.3)	54		

Table 3 depicts the factors associated with attempts to quit tobacco usage, variables like gender, knowledge regarding health problems on usage of tobacco and years of tobacco usage were found to have statistically significant association. Whereas the age group, socioeconomic status were statistically insignificant.



Graph 2: Awareness regarding cessation of tobacco usage

Graph 2 illustrates the level of awareness regarding tobacco cessation. 87.5% of them were not aware of any cessation centres, when asked about methods/medications available to assist in quitting, 62.5% of them were not aware of any such methods, while 20.3% of them were aware of some form of counselling sessions and 7.8% of them knew about nicotine replacement therapy.

DISCUSSION

The present study is aimed to assess the patterns of tobacco use, determinants influencing its initiation, awareness regarding health consequences, and factors associated with quitting attempts among adult tobacco users. The results highlight the multifactorial nature of tobacco dependence and cessation behaviour.

In this study, nearly half of the participants (50%) used smoking forms of tobacco, while 48.4% used smokeless tobacco, which is comparable to findings from the Global Adult Tobacco Survey (GATS 2, India 2016–17), where the prevalence of smokeless tobacco use was reported to be 21.4% and smoking tobacco at 10.7% among adults[5]. The higher

proportion of smokeless tobacco users in this study is due to easy availability, low cost, and sociocultural acceptability in rural areas, which is consistent with findings by Sinha et al. (2014)[4].

More than half (57.8%) of users reported initiating tobacco use between 15–25 years of age, which corresponds to global evidence that tobacco initiation often occurs during adolescence and young adulthood. Peer influence was identified as the most common reason for starting tobacco (60.9%), which is similar with the findings of Kishore et al. (2021), which emphasized that social influence and peer pressure remain dominant factors for initiation among youth[10].

Awareness regarding the health hazards of tobacco was high in the present study. In this study, 32.8% of participants were aware that tobacco use causes respiratory diseases, 28.9% were said it causes oral cancer, and 19.5% said it is associated with lung cancer. This finding is consistent with the WHO report (2021), which indicates that despite the global increase in awareness regarding the health consequences of tobacco use, such awareness frequently does not translate into behavioural modification, largely due to addiction, inadequate health literacy, and prevailing sociocultural determinants[5].

About 51.6% of participants had been advised to quit tobacco by a health worker, indicating reasonable health system engagement. However, only 45.3% had made a quit attempt in the past six months. This is similar to the national data where 38.4% of smokers and 33.2% of smokeless tobacco users attempted to quit in the preceding 12 months (GATS 2, 2016–17)[5]. Withdrawal symptoms (59.4%) were the predominant reason for relapse, which underscores the physiological dependence associated with nicotine addiction described by West (2009) and Hughes et al. (2004)[8].

Awareness regarding tobacco cessation services was notably poor, with 87.5% of respondents unaware of cessation centers and 62.5% unfamiliar with pharmacological or behavioural interventions. This shows there is lack of public awareness about cessation support systems in India, similar observations made by Raw et al. (2009), reported similar gaps in tobacco dependence treatment infrastructure across low- and middle-income countries[11].

Statistical analysis revealed that gender, knowledge regarding health effects, and duration of tobacco use were significantly associated with quit attempts. Males were more likely to attempt quitting than females (p=0.011), which aligns with national data showing higher cessation attempts among males participants with better knowledge of health risks were significantly more likely to attempt quitting (p=0.009), reinforcing the importance of health education and awareness. Individuals with shorter duration (<10 years) of use were more likely to attempt quitting, consistent with findings by Bhat et al. (2018) who reported that longer duration of use reduces the likelihood of cessation due to higher dependence levels[9].

The overall findings emphasize that while awareness regarding tobacco hazards exists, the gap between knowledge and practice remains wide. Psychological addiction, peer influence, and inadequate cessation support are critical barriers to successful quitting, as identified in multiple national and international studies. Therefore, interventions must focus on improving accessibility and visibility of tobacco cessation services.

Limitations

The study was cross-sectional and conducted among a limited sample in a specific geographic area, which may limit generalizability. Self-reported tobacco use may also introduce recall and social desirability biases.

CONCLUSION

The present study revealed a high prevalence of both smoking and smokeless forms of tobacco use, predominantly among males and individuals from middle socioeconomic groups. Peer influence played a major role in initiation, while withdrawal symptoms and stress were key barriers to quitting. Although awareness about the health hazards of tobacco was adequate, knowledge and utilization of cessation services were poor. Factors such as gender, awareness of health risks, and duration of use significantly influenced quit attempts. Strengthening health education, improving accessibility to tobacco cessation services, and enhancing community-based interventions are essential to promote successful quitting and reduce the tobacco burden in the population.

Source(s) of support: Nil

Conflicting Interest (If present, give more details): None

Ethical policy and Institutional Review board statement: The ethical clearance was obtained from the Institutional Human Ethics Committee (IHEC), Navodaya Medical College Hospital and Research centre.

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