

## PREVALANCE OF TOBACCO CONSUMPTION IN RURAL POPULATION OF PUDUCHERRY

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### Abstract

Tobacco smoking has been associated with multiple health problems and is considered to be a preventable risk factor for six of the eight leading causes of morbidity and mortality at the global level. The aim of this descriptive cross-sectional research study was to assess the prevalence of tobacco consumption in rural population of Puducherry. A total of 255 rural populations were selected by using a multistage random sampling technique. Assessment of the smoking and smokeless tobacco consumption, awareness and knowledge regarding tobacco consumption were done by using a Modified GATS (Global Adults Tobacco Survey) questionnaire. The collected data were computerized and analyzed using SPSS version 25. The data were analyzed using the descriptive statistics (distribution, mean, standard deviation) and inferential statistics (Chi square test).The result shows that the rural population 40 (15.7%) were consumed smoking tobacco and 36 (14.1%) were consumed smokeless tobacco. The factors influencing smoke and smokeless tobacco consumption were due to low socio economic status (11.6%), peer pressure (10.1%) and tobacco consumption habits of family members (7.8%). None of the demographic variables had shown statistically significant association with the prevalence of tobacco consumption. The study concludes that

tobacco consumption prevalence was increasing in rural areas. Women used mainly smokeless tobacco. Tobacco control programmes need to develop strategies to address the different subgroups among tobacco users. Public health facilities need to expand smoking cessation counselling services as well as provide pharmacotherapy where necessary.

Keywords: Prevalence, tobacco consumption, rural population, Puducherry.

## **INTRODUCTION**

Tobacco is one of the most readily legally available, and accessible substance primarily contributing to death, suffering and being one of the major causes of various NCDs. Chillum, cigars, cheroots, chuttas, hookah, and pipes are different types of smoking forms of tobacco. More than 40 types of smokeless tobacco (SLT) like paan, paan masala, khaini, zarda, mawa, gutka and mishri and gudakhu are used in chewing, snuffing and applying in teeth and gums. At individual-level, the determinants include gender, wealth index, caste, parental-use, and peer-use, impact of advertisement, education, and place of stay (**Bharati B, Sundar KS and Pati S, 2021**).

Prevalence of tobacco use was higher in the elderly group and males. Women mainly consider using smokeless tobacco. Since tobacco use is one of the avoidable causes of morbidity and mortality, efforts should be made to control tobacco use in the country by improving the number and quality of facilities of tobacco cessation treatment, implementing usage based intervention strategies with counselling facilities and rigorous implementation of the prohibition of smoking in public places (**Barathalakshmi J, Sivapragasam R and Tamilselvi V, 2019**).

## **NEED FOR THE STUDY**

Worldwide, consumption of smoked and Smoke Less Tobacco (SLT) is a considerable threat to public health, leading to eight million deaths every year and is in the priority list of many countries. More than two-third of the death in developing countries is due to non-communicable diseases and consumption of tobacco is a leading risk factor **(Bharati B, Sundar KS and Patil S, 2021)**. Globally tobacco use alone ranks fourth in terms of contribution to years of life lost; also worldwide smoking causes about 71% of lung cancer, 42% of chronic respiratory diseases, 10% of cardiovascular disease and is responsible for 12% and 6% of male and female deaths respectively **(Vinothkumar G et al 2020)**. The tobacco use situation in India is complex owing to the availability of various forms of tobacco. An adolescents and early adulthood, aged 15 to 24 years, are considered to be the most susceptible phase of life for initiation of tobacco use in India. Based on available evidence, it is estimated that 5% to 25% of Indian adolescents currently use or have ever used tobacco. Even though smokeless tobacco is used less commonly and high rates of its use have been reported in India among adolescents aged 13 to 15 years i.e. 15% of boys and 5% of girls **(Shekhar Grover et al 2020)**. A study conducted in Puducherry and found that 90 % current tobacco users and 95% were daily tobacco users. Among current tobacco users, 48.8%, 45.6%, and 5.6% were smokers, smokeless tobacco users, and dual users respectively. The majority of the smokers (61%) and most of the smokeless tobacco users (41%) had medium dependence for tobacco use **(Nanda NB et al 2017)**.

## **LITERATURE REVIEW**

Related literature review done in the following headings,

### **1) Prevalence of tobacco consumption among rural population**

A community based cross sectional study on prevalence and determinants of tobacco use in a remote rural area of Chunampet, Chengalpattu District of Tamilnadu among 14925

population. The data were collected by using current smokers and tobacco chewer's questionnaire. The results showed that 6% of them were tobacco users, 3.5% were smokers and 3% were tobacco chewers. There was a significant association between tobacco chewing and alcoholic, female, increase in age illiteracy, open defecation, having kutchra or semi-pucca house, hypertension, married and widow ( $p < 0.05$ ). The study concluded that tobacco use in a distant rural place was greater (**Vinothkumar G et al 2020**).

The prevalence of tobacco use among men was 45.5%, smoking was 24.6%, smokeless tobacco use was 29.1%, and both smoked and smokeless tobacco use were 8.4% in 112,122 men aged 15–54 years in India (**Shariful MI et al 2020**). The prevalence of smoke was 5% and smokeless tobacco usage was 10.9% among the 13329 youth in India of evidence from Global Adult Tobacco Survey-2 (**Grover S et al 2020**). A cross-sectional study did on tobacco usage 200 among rural population of Puducherry and the results showed that 28% belonged to 16–35 years of age, 42.5% belonged to 35–55 years, and 29.5% belonged to 55 years and above. There was a significant association between gender and smokeless tobacco (**Barathalakshmi J et al 2019**).

## **2) Factors influencing tobacco consumption among rural population**

**Radha et al (2019)** did a study to estimate factors influencing the prevalence of tobacco use among 13-15 years old high school children to assess their knowledge, attitude, and behaviour regarding tobacco use in 210 schools by a convenient sampling technique using youth tobacco questionnaire. The result found that 12.9% used chewing tobacco, 15.2% used smoking and 3.3% of participants use both forms. The association was found to be more

significant with knowledge ( $p=0.003$ ) and attitude ( $p<0.001$ ). The study results revealed that tobacco use by parent, siblings & teachers influences to use. Knowledge about the harmful effects of tobacco use in children was poor.

**Verma et al (2019)** performed a cross-sectional study to assess the prevalence, pattern elements influencing the habit of tobacco consumption to see the correlation between the habit of tobacco consumption and education to evaluate the tobacco induced oral lesion among 500 students aged between 8 and 14 years using a structured, close-ended pre validated questionnaire. Influencing factors for tobacco consumption were students 16.4%, friends 78.4%, family members 12.2%, and media 9.7%. **Sharma et al (2015)** carried a cross-sectional study on perceptions and factors influencing tobacco use among 15- 20 years of 2400 college students in Bangalore city using a Global Youth Tobacco Survey with random sampling. The study result revealed that smokeless among upper-middle-class people were 19.3% smoke because of fathers, 28.4% with friends, 38.8% with TV videos, movies, and media. They concluded that factors influencing were a family influence, parental tobacco use, use by friends, advertisements in media & community, access & availability of tobacco products near the residential area.

## **OBJECTIVES**

- To assess the prevalence of tobacco consumption among rural population
- To assess the factors influencing tobacco consumption in the rural population
- To find an association between the prevalence of tobacco consumption and their selected demographic variables.

## **RESEARCH METHODOLOGY**

Ethical permission was obtained from the Institutional Human Ethics committee of Vinayaka Mission's College of Nursing, VMRF (DU), Puducherry dated 12/02/2021. The formal permission had been obtained from the authority. A multistage random sampling technique was used to select the samples who fulfil the inclusion criteria such as the participants who were willing to participate in the study, who speak Tamil or English and who were available in the area during data collection. Rural population who were mentally ill /impaired hearing and residing out of rural field practice areas of AVMC&H Puducherry were excluded. The written informed consent was obtained from each study participant.

In the first stage, a lottery method of sample random sampling technique was chosen to select the first house and followed by a systematic random sampling was employed under which every eight house was selected in the areas, till the desired sample size was obtained. In the second stage, house to house survey was done. If there was more than one adult aged between 18 and 60 years in the house, a lottery method of simple random sampling technique was used to recruit one eligible adult. In case, there was no eligible adult in the house, the very next house was selected. Data such as demographic variables and a modified GATS survey questionnaire which consisted of questions related to the current consumption tobacco, the practice of tobacco and cessation of tobacco, awareness about tobacco products, knowledge about diseases caused by tobacco, and influencing factors for tobacco consumption were collected. Identified tobacco users were taught about the ill effects of tobacco and then they were referred to the rural health centre of AVMC&H, Puducherry for screening and further management.

## **DATA ANALYSIS AND INTERPRETATION**

### **Table 1: Distribution of demographic variables of rural population**

The table 1 shows that most of the rural population, 106 (41.6%) were aged between 38 and 47 years, 121 (47.5%) were male, 92 (36.1%) were unmarried, 108 (42.4%) were Hindus, 76 (29.8%) had high school education, 112 (43.9%) were private employee, 146 (57.3%) belonged to nuclear family, 101 (39.6%) had a family income of Rs.16,020-32,049 and Rs.8,010-12,019 respectively and 114 (44.7%) had media as a source of getting health information.

**Table 2: Distribution of prevalence of tobacco consumption among rural population**  
N=255

Sl. No.	Prevalence of Tobacco use	n	%
1.	<b>Current use of smoking tobacco</b>		
	Daily	25	9.8
	Less than daily	15	5.9
	Not at all	215	84.3
2.	<b>Current use of smokeless tobacco</b>		
	Daily	26	10.2
	Less than daily	10	3.9
	Not at all	2	0.8
	Refused	217	85.1

The table 2 shows that 40 (15.7%) were consumed smoking tobacco and 36 (14.1%) were consumed smokeless tobacco.

**Table 3** shows that most of the rural population 25 (9.8%) consumed smoked tobacco daily, 15 (5.9%) were consumed smoked tobacco less than daily. About 26 (10.2%) were med smokeless tobacco daily and 10 (3.9%) were used less than daily.

**Table 4** shows that 5.8% of the people were purchased loose bidis, 5.9% were purchased loose products of smokeless tobacco, 7.4% were tried to stop using smokeless tobacco and 5.4% were thinking to stop smokeless tobacco for many days. Regard to health warming, 68.6% of them said that were noticed tobacco health warming, 52.5% were heard advertisement about smoking or smokeless tobacco product on radio. About 29% were believed that smoking tobacco causes serious illness to health.

**Table 5** revealed that 5.9% of the population were saying that each cigarette packet contain 15 cigarettes. Regard to impact of smoking tobacco, 59.2% of them was answered heat attack, stroke (38.4%) and lung cancer (2.4%). About 59.2% answered dental diseases can occur due to smoking tobacco.

**Table 6: Distribution of influencing factors for tobacco consumption among rural population**

N=76

SI. No.	Influencing Factors	n	%
1.	Low socioeconomic status	30	11.6
2.	Influence of family members	20	7.8
3.	Peer pressures	26	10.1
<b>Total</b>		76	29.8

The table 6 depicts the influencing factors among rural population who consuming smoke and smokeless tobacco. About 30 (11.6%) were used tobacco due to lower



socioeconomic status, 10.1% were using due to peer pressure and 7.8% of them were used due to tobacco consumption habits of family members.

#### **Table 7: Association**

None of the demographic variables had shown statistically significant association between current use of smoking or smokeless tobacco and their selected demographic variables of rural population.

### **THE MAJOR FINDING OF THE STUDY**

#### **Finding related to demographic variables**

The majority of the rural population, 106 (41.6%) were aged between 38 and 47 years, 121 (47.5%) were males, 92 (36.1%) were unmarried, 108 (42.4%) were Hindus, 76 (29.8%) had high school education, 112 (43.9%) were private employees, 146 (57.3%) belonged to nuclear family, 101 (39.6%) had a family income of Rs. 16,020-32,049 and Rs.8,010-12,019 respectively and 114 (44.7%) had media as a source of getting health information.

#### **The prevalence of tobacco consumption among rural population**

About 40 (15.7%) were consumed smoking tobacco and 36 (14.1%) were consumed smokeless tobacco. The study findings were supported by **Grover S et al (2020)** conducted a cross-sectional GATS-2 survey and found that the prevalence of smoke was 5% and smokeless tobacco usage was 10.9%. There was a higher significant association between any form of tobacco and aged 20 to 24 years. **Chethana KV and Ramesh (2016)** found that current smoking- 26.72% (male-48.5%, female-0%), current smokeless tobacco use 12.5% (male-15.8% and female 8.5%). **Kumar RG et al (2016)** found that the overall prevalence of tobacco consumption was 19.7%. The study concluded that there is terrible require for smoking cessation counselling assistance across the country. **Ndugwa SK et al (2016)**

revealed that 9.2 %, 7.4 % and 2.9 % were daily tobacco users, daily smoked tobacco users and daily smokeless tobacco users respectively.

### **Influencing factors to consume tobacco among rural population**

The factors influencing smoke and smokeless tobacco consumption, about 26 (10.1%) were consuming tobacco due to peer pressure, 30 (11.6%) were due to low socio economic status, 20 (7.8%) were due to tobacco consumption habits of family members. These findings were supported by **Hossain S et al (2017)** did a cross-sectional survey on prevalence of tobacco smoking and factors associated with the initiation of smoking among 264 University students in Dhaka, Bangladesh and found that the influence of friends was the most significant reason for initiating tobacco smoking. **Verma et al (2019)** did a cross-sectional study and found that the influencing factors for tobacco consumption were students (16.4%), friends (78.4%), family members (12.2%), and media (9.7%). **Etu et al (2018)** found that a high social pressure factors independently associated with smokeless tobacco use in Ethiopia. **Myint et al (2016)** study found that factors influencing for betel nut chewing among 420 participants in Myanmar was family & peer pressure. A Global Youth Tobacco Survey with random sampling was conducted in Bangalore city among 2400 college students aged between 15 and 20 years and revealed that influencing factors for smokeless tobacco in upper-middle-class were 19.3% because of fathers, 28.4% due to friends, 38.8% due to videos, movies and media. They concluded that factors influencing were a family influence, parental tobacco use, use by friends, advertisements in media & community, access & availability of tobacco products near the residential area.

### **CONCLUSION**

The main objective of the study was to find the prevalence of tobacco consumption among rural population in Puducherry. The statistical analysis revealed that tobacco

consumption prevalence was higher in rural areas. Women used mainly smokeless tobacco. Tobacco control programmes need to develop strategies to address the different subgroups among tobacco users. Public health facilities need to expand smoking cessation counselling services as well as provide pharmacotherapy where necessary.

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