

A Survey on Prevalence of Tobacco Use Among the Males in Uvarsad, Gandhinagar, Gujarat

Sujay Shah^{1*} Rutu Shah² Shrinal Mankiwala³ Mihir Shah⁴

¹Ph.D Scholar, Department of Periodontology, Gujarat University, Ahmedabad, Gujarat, India.

²Tutor, Department of Anesthesiology, BJ Medical College and Hospital, Ahmedabad, Gujarat, India.

³Private Consultant, Department of Oral and Maxillofacial Surgery, Ahmedabad, Gujarat, India.

⁴Professor and Head, Department of Periodontology, Ahmedabad Dental College, Ahmedabad, Gujarat, India.

ABSTRACT

Background: India is home to the most significant number of oral cancer patients. This is probably due to the massive consumption of tobacco and its related products. Tobacco is also related to other health problems like cardiovascular disease and chronic lung disease. The present study was conducted to find the prevalence of tobacco use in Uvarsad, Gandhinagar.

Materials and Methods: A cross-sectional study was designed in a rural setting at Gandhinagar from March 2019 to July 2019. Total of 200 male subjects from Uvarsad, Gandhinagar were randomly included in the study. The age group of the samples were from 25 years to 65 years. Statistical analysis was performed.

Results: A total of 200 males were included in this study. The mean age of the subjects was 41.42 ± 10.03 Years. Prevalence of smoked tobacco is far less than its chewable form. Mean age smoking initiation was as early as 28 years and 27 years for chewable tobacco. The Prevalence of smoking (10.61%) was highest in the age group of 56 years and above, while the prevalence of smokeless tobacco consumption was highest in 36 to 45-year age group (27.32%).

Conclusion: Tobacco is one of the most revenue earning commodity for any country; hence, it becomes difficult for any government to ban the product. However, we as a clinician, has a more prominent role to play in society. We should spread awareness among the people and help them reduce the risk associated with tobacco use.

Keywords: Prevalence, tobacco, survey, Uvarsad, Gandhinagar.

INTRODUCTION

Tobacco use is one of the primary cause of oral cancer¹. Every year tobacco leads to over 5 million death worldwide. In India, nearly one million people die due to tobacco-related diseases every year. Tobacco as introduced into south Asia in early 16th century². South Asia is one of the biggest exporter and consumer of tobacco worldwide². Tobacco in traditional forms like tobacco with lime, betel quid and powder form are commonly used among all age groups¹.

Tobacco consumption is also directly attributed to cardiovascular diseases and chronic lung disease³. It is estimated that they are approximately one billion smokers in the world, and these smokers consume about 6 trillion cigarettes annually⁴. Chewable tobacco is a significant risk factor for oral cancers⁵. A study by Giovina⁶ concluded that tobacco consumption was frequent and higher in the lower socioeconomic group.

India is home to about 700 billion annual 'bidis' consumers. Bidi is a type filter less hand-rolled

Received: June. 11, 2019; Accepted: July. 28, 2019

*Correspondence Dr. Sujay Shah.

Department of Periodontology, Gujarat University, Ahmedabad, Gujarat, India.

Email: sbs_den@yahoo.co.in

cigarette. In India, tobacco is used in different forms and available at a various price range. India is the third-largest producer and second-largest consumer of tobacco products in the world⁷. A survey undertaken by the Global Adult Tobacco Survey (GATS) showed that 52 per cent of adults in India were exposed to second smoke (SHS) at home. Narayana et al.⁸, in his study, explained an increased role of education as a predictor of smoking in men and women. Bala et al.⁹ concluded that smoking was more prevalent in illiterates than literates with less than seven years of schooling.

The present study was conducted in rural settings of Uvarsad, Gandhinagar. Uvarsad is a rural area in Gandhinagar district. The objective of the present study was to study the consumption of tobacco in different forms and population.

MATERIALS AND METHODS

A cross-sectional study was designed in a rural setting at Gandhinagar from March 2019 to July 2019. Total of 200 male subjects from Uvarsad, Gandhinagar were randomly included in the study. The age group of the samples were from 25 years to 65 years¹⁰. To analyse the sample size, the prevalence was taken as 35% in the rural population, and formulae used was $n = 4qp/L^2$ where L was born as 15%. The calculated sample size was 182 but considering that few subjects may not respond to study, the sample size was kept at 200.

All the demographic details and information on tobacco use was obtained by using a predesigned and pre-tested questionnaire. Informed consents were taken by all the subjects. Data entry was done using Microsoft Excel (Microsoft office Version 2016, USA.) and analysed by SPSS (v8 for windows, IL, USA.).

RESULTS

A total of 200 males volunteered for this study. Majority of subjects belonged in the age group of 46 to 55 age group (33.5%) followed by 25 to 35 years age group (28%). The mean age of the subjects was 41.42 ± 10.03 Years. Majority of participants belonged to the joint family (89%) whereas 11% belonged to a nuclear family. Data also showed that most of the subject who were married (66%),

consumed more amount of tobacco than the single ones (32.5). The analysis also shows that educated people (66.5%) consumed more tobacco than illiterate ones (33.5%) (Table 1).

Table 2 shows that the prevalence of smoking is much lower. When it comes to the preference, then people choose bidi (84.61%) on a cigarette (15.31%). The subjects who were currently non-smokers were divided into two groups of former smokers and never smokers. The subjects who never smoked were 52%, followed by former smokers (48%). Mean age smoking initiation was as early as 28 years.

Next data was analysed for the subjects who used smokeless tobacco products (Table 3). Most of the subjects consumed gutka (53.09%) followed by pan masala (26.54%) and tobacco with lime (20.35%). Among the current no user group, 47.12% were the former user, whereas 52.87% never used the smokeless tobacco product. The mean age of smokeless tobacco consumption initiation was 27 Years.

Table 4 shows the prevalence of smoking (10.61%) was highest in the age group of 56 years and above followed by 36 to 45-year age group (6.87%), 46 to 55-year age group (5.32%), and 25 to 35-Year age group (4.51%). Prevalence of smokeless tobacco consumption was highest in 36 to 45-year age group (27.32%) followed by more than 56 years age group (22.82%), 46 to 55-year age group (18.12%), and 25 to 35 Year age group (14.01%).

Table 1: Socio-demographic profile of the study population (200).

Socio-demographic Variables	N(%)
Age	
25-35	56 (28)
36-45	36 (18)
46-55	67 (33.5)
≥56	41 (20.5)
Type of Family	
Nuclear	22 (11)
Joint	178 (89)
Marital Status	
Single	65 (32.5)
Married	132 (66)
Widow/widower	3 (1.5)
Education	
Illiterate	67 (33.5)
Educated	133 (66.5)

Table 2: Data of Tobacco smoking habits among males.

Status of smoking	N(%)
Current Smoker	26 (13)
<i>Bidi</i>	22 (84.61)
<i>Cigarette</i>	4 (15.38)
Current Non Smoker	174 (87)
<i>Former Smoker</i>	84 (48.27)
<i>Never Smoker</i>	90 (51.72)
Mean age of smoking initiation	28.23 ± 7.38 Years

Table 3: Data regarding the use of smokeless tobacco products.

Status of tobacco use type	N(%)
Current User	113 (56.5)
<i>Pan Masala</i>	30 (26.54)
<i>Gutka</i>	60 (53.09)
<i>Tobacco with lime</i>	23 (20.35)
Current Non User	87 (43.5)
<i>Former User</i>	41 (47.12)
<i>Never Used</i>	46 (52.87)
Mean age of initiation	27.28 ± 6.13 Years

Table 4: Prevalence of tobacco consumption in different age group.

Age Group	Current smokers (%)	Current use of smokeless tobacco (%)
25-35	4.51	14.01
36-45	6.87	27.32
46-55	5.32	18.49
≥56	10.61	22.82

DISCUSSION

The prevalence of smoking among the males of Uvarsad was 13% (table 2) which is in accordance with the study conducted by Bhagyalaxmi et al.¹¹, in the district of Gandhinagar and Mehan et al. in Vadodara¹². According to mehan et al., the prevalence of smoking in Vadodara males were 12.2%¹². whereas the prevalence data by Bhagyalaxmi in Gandhinagar was 12.8%¹¹. The study conducted by ICMR-WHO lower incidence at the national level. This can be attributed to the difference in sample variation at the national level.

Tobacco consumption in the educated group of subjects was more than the illiterate group. Similar findings have been reported by Maralani V¹³. She demonstrated the relevance of education in tobacco

addiction. She stated that tobacco habits are acquired as early as 12 to 18 years, at the time of schooling long before the higher education is obtained.

Osazuwa-Peters, in his study, reported that the married men were less likely to consume tobacco products¹⁴, but in our research, we found married men to consumed more amount of tobacco products than their counterparts. In his study, he found 61% of unmarried men to be smokers. When compared with our study only 32.5% of single men were smokers.

In this study, the mean age of tobacco initiation was recorded as 28.23 Years in smokers and 27.28 years in tobacco chewers. In another study conducted at Jamnagar, the mean age of tobacco initiation was found to be 26.5 years in smokers and 23.6 years in tobacco chewers¹⁵. Tobacco and gutka were the prominent forms of tobacco that were consumed in the present study. This finding was in accordance with Joshi et al. who also found mawa masala was the predominant form of tobacco abuse¹⁵. The reason for this can be attributed to the low cost, which is preferable in the rural and low-income group.

In the current study, smoking was most prevalent in age group 56-years, and above whereas, smokeless tobacco consumption was highest in 36 to 45-year age group. The finding of this study is very similar to the survey conducted by Dhara et al., who also reported that smoking is more prevalent in the age group of 55 years and above¹⁶. According to the study conducted by GATS-India in 2009, smoked tobacco consumption was highest in a 45-54-year group whereas, and chewable tobacco use was highest in 65-year and above group. The reason for this increase can be due to the financial affordability at the given age. Sen et al. reported a similar finding in his study. He too concluded that tobacco consumption was increased along with the increase in age¹⁷.

CONCLUSION

India is one of the biggest consumers of tobacco products. People in this region are introduced to tobacco at an early age of 28 years. Tobacco consumption increased with the progression in age and reached its highest at the age of 56 years or

above. Prevalence was demonstrated more in an educated group of people. Hence the time has come to make the general public aware of the ill effect of tobacco, and a change in government policy is urgently required.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

REFERENCES

1. Gupta B, Johnson NW. Systematic Review and Meta-Analysis of the Association of Smokeless Tobacco and of Betel Quid without Tobacco with Incidence of Oral Cancer in South Asia and the Pacific. *PLoS One*. 2014;9(11). doi:10.1371/journal.pone.0113385
2. Gupta PC, Ray CS. Smokeless tobacco and health in India and South Asia. *Respirology*. 2003;8(4):419-431.
3. Keith RJ, Fetterman JL, Riggs DW, et al. Protocol to assess the impact of tobacco-induced volatile organic compounds on cardiovascular risk in a cross-sectional cohort: Cardiovascular Injury due to Tobacco Use study. *BMJ Open*. 2018;8(3). doi:10.1136/bmjopen-2017-019850
4. Giovino GA, Mirza SA, Samet JM, et al. Tobacco use in 3 billion individuals from 16 countries: an analysis of nationally representative cross-sectional household surveys. *Lancet*. 2012;380(9842):668-679. doi:10.1016/S0140-6736(12)61085-X
5. Critchley JA, Unal B. Health effects associated with smokeless tobacco: a systematic review. *Thorax*. 2003;58(5):435-443. doi:10.1136/thorax.58.5.435
6. Giovino GA, Henningfield JE, Tomar SL, Escobedo LG, Slade J. Epidemiology of tobacco use and dependence. *Epidemiol Rev*. 1995;17(1):48-65. doi:10.1093/oxfordjournals.epirev.a036185
7. Mohan P, Lando HA, Panneer S. Assessment of Tobacco Consumption and Control in India. *Indian Journal of Clinical Medicine*. 2018;9:1179916118759289. doi:10.1177/1179916118759289
8. Narayan KM, Chadha SL, Hanson RL, et al. Prevalence and patterns of smoking in Delhi: cross sectional study. *BMJ*. 1996;312(7046):1576-1579. doi:10.1136/bmj.312.7046.1576
9. Bala D, Bodiwala IN, Patel D, Shah P. Epidemiological Determinants of Tobacco Use In Gujarat State, India. 2006;31(3):4.
10. Life Expectancy | NITI Aayog. <https://niti.gov.in/content/life-expectancy>. Accessed September 29, 2019.
11. Bhagyalaxmi A, Atul T, Shikha J. Prevalence of risk factors of non-communicable diseases in a District of Gujarat, India. *J Health Popul Nutr*. 2013;31(1):78-85. doi:10.3329/jhpn.v31i1.14752
12. Mehan MB, Srivastava N, Pandya H. Profile of non communicable disease risk factors in an industrial setting. *Journal of Postgraduate Medicine*. 2006;52(3):167.
13. Maralani V. Understanding the links between education and smoking. *Soc Sci Res*. 2014;48:20-34. doi:10.1016/j.ssresearch.2014.05.007
14. Osazuwa-Peters N, Adjei Boakye E, Chen BY, Tobo BB, Varvares MA. Association Between Head and Neck Squamous Cell Carcinoma Survival, Smoking at Diagnosis, and Marital Status. *JAMA Otolaryngol Head Neck Surg*. 2018;144(1):43-50. doi:10.1001/jamaoto.2017.1880
15. Joshi U, Modi B, Yadav S. A study on prevalence of chewing form of tobacco and existing quitting patterns in urban population of Jamnagar, Gujarat. *Indian J Community Med*. 2010;35(1):105. doi:10.4103/0970-0218.62560
16. Prajapati DJ, Bavarva NR. Prevalence of Tobacco Use among Government Employees in Ahmedabad, Gujarat. 2018;9(5):322-326.
17. Sen U, Basu A. Factors Influencing Smoking Behavior Among Adolescents. *Asian Pac J Cancer Prev*. 2000;1(4):305-309.