

## Original Article

# A Survey on Urban Adult Addiction Pattern

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## INTRODUCTION

Oral cancer is a relatively common disease which can be prevented if the risk factors are controlled. This is a multifactorial disease; however, two major known risk factors for oral cancer are tobacco and alcohol. These factors have a synergistic effect, so people who both use tobacco and drink have a much higher risk of oral cancer than those using only tobacco and alcohol.<sup>[1]</sup> Other cofactors that have been implicated in the development and progression of oral cancer include poor nutrition, exposure to ultraviolet light, excessive spicy food, continuous irritation, and the human papillomavirus.<sup>[2]</sup> The risk for oral cancer is higher in the Indian subcontinent because of the production and usage of pan (a combination of betel leaf, lime, areca nut, and sun-cured tobacco) and smoking of cigarette and bidi (dried temburni leaf around approximately 0.2–0.3 g of sun-dried, oriental tobacco and securing the roll with a thread). Oral cancer has been found to be common in males and people of lower socioeconomic groups.<sup>[3]</sup> It has been found that a large percentage of Indian oral cancers are tobacco related and the possibility of developing a tobacco-related lesion is ten times higher if the habit is formed below the age of 14 years.<sup>[4]</sup>

## ABSTRACT

**Introduction:** Oral cancer is a multifactorial disease, which is largely preventable. Awareness about cancer and its risk factors and symptoms can lead to prevention and early clinical diagnosis. Proper monitoring of the high-risk population along with periodic follow-up and deaddiction protocol can help reduce the incidence of oral cancer and lead to an early clinical diagnosis.

**Materials and Methods:** A pretested questionnaire was the primary tool of the study. It had a total of 24 questions which were divided into three categories which would analyze the awareness, habits, and symptoms. **Results:** We found a statistically significant correlation between habits and symptoms and also between habit, age, and awareness. **Conclusion:** The study emphasizes the need for improving awareness and self-assessment of oral symptoms for early detection of precancerous lesions.

**KEYWORDS:** Alcohol, precancerous lesions, questionnaire, tobacco

Early diagnosis can be ensured by recognizing the early signs and symptoms in order to facilitate treatment in the early stages of the disease. A large number of patients in spite of symptoms do not consult a health-care professional either due to lack of knowledge and awareness or social stigma and responsibilities.<sup>[5]</sup> Among all these, lack of awareness has been found to be the primary cause for delay in seeking help for oral cancer.<sup>[6]</sup> This lack of awareness about oral cancer in the UK has been reported by Warnakulasuriya<sup>[7]</sup> who reported that the awareness of the early signs of the disease was found to be low (except for persistent ulcers).<sup>[8]</sup> A strong correlation has been found between low awareness and high risk.<sup>[9]</sup> Speight *et al.*<sup>[10]</sup> and Johnson *et al.*<sup>[11]</sup> have proposed that targeted opportunistic oral cancer screening of high-risk individuals may be the most effective method for oral cancer screening. This screening involves a simple and systematic examination of the oral cavity and associated structures.<sup>[12]</sup>

Visual inspection of the oral cavity is a simple, acceptable, and accurate screening technique for oral neoplasia. However, screening requires a large

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well-trained workforce, which may not always be possible. The second option for screening is self-assessment, using a questionnaire. This is a simple method of creating awareness which is actually the first step for preventing cancer.

Indore Cancer Foundation, a public charitable trust with the help of volunteers, and through its flagship project the Indian Institute of Head and neck Oncology, through its employees as well, is working on door-to-door survey on the prevalence of tobacco, focusing on the importance of early detection.

The present study aimed to identify high-risk population for oral cancer and also to improve the awareness about oral cancer and its risk factors using a pretested questionnaire.

## MATERIALS AND METHODS

### Material

a pretested questionnaire comprising 24 questions which were divided into three categories was the primary tool. The questions were scored as No = 1 and Yes = 2. The total score for each section was separately calculated to determine the high- and low-risk groups (the questionnaire along with the scoring criteria is mentioned below):

#### a. Knowledge and awareness:

##### ज्ञान एवं जागरूकता

1. Have you heard about oral cancer?  
क्या आप मुँह के कैंसर के बारे में जानते हैं ?
2. Do you know anyone who had mouth cancer?  
क्या आप ऐसे किसी व्यक्तिको जानते हैं जिसे मुँह का कैंसर हुआ है ?
3. Do you know the cause of oral cancer?  
क्या आप जानते हैं मुँह का कैंसर काय से होता है ?
4. Is oral cancer a contagious disease?  
क्या मुँह का कैंसर छूत की बीमारी है ?
5. Can smoking cause oral cancer?  
क्या बीड़ी/सगिरट पीने से कैंसर होता है ?
6. Can alcohol cause oral cancer?  
क्या शराब पीने से मुँह का कैंसर होता है ?
7. Does pan chewing cause oral cancer?  
क्या पान चबाने से मुँह का कैंसर होता है ?
8. Is poor oral health a cause of oral cancer?  
क्या खराब दाँत वमसूड़े की वजह मुँह का कैंसर हो सकता है ?
9. Is oral cancer related to age?  
क्या मुँह के कैंसर का उम्र से कोई संबंध है ?

#### b. Habits:

10. Do you smoke cigarette or bidi?  
क्या आप बीड़ी/सगिरट पीते हैं ?
11. Do you chew pan with tobacco?  
क्या आप पान चबाते हैं ?

#### 12. Do you eat pan masala?

क्या आप पान मसाला खाते हैं ?

#### 13. Do you consume alcohol?

क्या आप शराब का सेवन करते हैं ?

#### 14. Any of your family members chews tobacco/smokes?

क्या आपके परिवार का कोई सदस्य तंबाकू का किसी भी स्वरुप में उपयोग करता है ?

#### c. Presence of symptoms:

##### चर्निह

#### 15. Have you ever examined your oral cavity?

क्या आपने अपने मुँह को अंदर से देखा है ?

#### 16. Do you have difficulty in opening the mouth?

क्या पूरा बड़ा मुँह खोलने में कोई तकलीफ होती है ?

#### 17. Do you have burning sensation on eating normal food/hot and spicy food?

क्या आपको सामान्य खाना खाने में तीखा लगता है ?

#### 18. Do you have any red or white patches in your oral cavity?

क्या आपके मुँह में कोई लाल या सफ़ेद चट्टा, छाला है ?

#### 19. Do you have any sharp tooth that hurt your cheek?

क्या आपके मुँह में कोई नुकीला या धार वाले दाँत है जो चुभते हो ?

#### 20. Do you have any ulcer that has not healed for more than 3 weeks?

क्या आपके मुँह में कोई छाला है जो तीन हफ़्ते से ज्यादा हो गए और भरा या ठीक न हुआ हो ?

#### 21. Have you noticed a change in voice in the last 2-3 weeks or before that?

क्या पछिले दो तीन हफ़्तों में आप की आवाज में कोई बदलाव हुआ हो जो ठीक नहीं हो रहा

#### 22. Do you continuously suffer from earache?

आपके कान में दर्द जो लगातार बना हुआ हो ?

#### 23. Do you have difficulty in swallowing food?

क्या आपको खाना नगिलने में कोई तकलीफ होती है ?

#### 24. Have you noticed any swelling in your neck?

क्या आपको गले, गर्दन में कोई सूजन या गठान महसूस होती है ?

### Scoring

- Scoring for all questions Yes = 2 and No = 1
- Scoring in I Category (General knowledge and awareness) – 9 questions
  - Low awareness = 9–13
  - High awareness = 14–18
- Scoring in II Category (Habits) – 5 questions
  - Low risk = 5–7
  - High risk = 8–10
- III Category (Symptoms) – 10 questions

- Low risk = 10–15
- High risk = 16–20.

The study was carried out on all the employees of the Madhya Pradesh Paschim Kshetra Vidyut Vitran Company Limited (MPPKVV). MPPKVV is a venture of the Government of Madhya Pradesh which was established on July 1, 2002, to undertake the activities of distribution and retail supply for and on behalf of Madhya Pradesh State Electricity Board in the areas covered by the commissionaires of Indore and Ujjain. Paschim Kshetra encompasses an area served by 77,021 km of high tension (HT) and 137,105 km of low tension (LT) distribution network.

A closed-ended questionnaire was developed which was administered to a pilot group. After validating the questionnaire and modifying it, an improvised version was created which was used as the primary tool for this study. The questionnaire was prepared in such a way that it was easy to understand and was constructed in the local language. The human resources heads were briefed about the questionnaire as they would be administering the questionnaire. This being a self-assessment questionnaire, no special training was required. All incompletely filled questionnaires were omitted from the study.

### Analysis

Descriptive statistics were used to describe the sample, their knowledge, and experiences. Inferential statistics were then used to check for relationships between outcome measures and risk factors (e.g., alcohol use and smoking status) and sociodemographic factors (gender, age, educational qualification, and socioeconomic classification). The Statistical Package for the IBM SPSS Statistics for Windows, Version 24.0 (IBM Corp., Armonk, NY, USA) was used for analyzing the data.

## RESULTS

### Response rate

The questionnaire was administered to a total of 8000 persons, who were employed with the MPPKVV. After omitting the incomplete questionnaires, a total of 6795 questionnaires were received for the analysis.

Table 1 shows a summary of the sociodemographic characteristics of the participants.

### Alcohol use

Nearly 7.80% of males and 1% of female respondents reported consuming alcoholic drinks.

### Tobacco use

Nearly 9% of males and 1% of females had the habit of chewing tobacco, whereas 11.3% of males and 1% of females had the habit of smoking.

**Table 1: Age, sex, educational status, and habit distribution in all the patients**

	Female		Male	
	Count	Percentage	Count	Percentage
Gender	303	4.5	6492	95.5
AGE				
20-29	81	26.73%	850	13.09%
30-39	47	15.51%	964	14.85%
40-49	24	7.92%	537	8.27%
50-59	130	42.90%	3736	57.55%
60-69	3	0.99%	81	1.25%
70-79	0	0.00%	3	0.05%
NM	18	5.94%	321	4.94%
Education				
Primary School	44	14.50%	2563	39.50%
HSC	30	9.90%	1461	22.50%
Graduate	78	25.70%	1367	21.10%
Post Graduate	123	40.60%	481	7.40%
Not Mentioned	28	9.20%	620	9.60%
Habits				
Smoking	3	1%	734	11.30%
Chewing Tobacco	3	1%	586	9.00%
Eating Pan Masala	8	2.60%	694	10.70%
Consume Alcohol	3	1%	505	7.80%
More than one Habits	58	19%	2237	34.50%
No Habits	245	81%	4255	65.50%

## DISCUSSION

This survey sought to document if any relation existed between awareness, habits, and symptoms. Males constituted the majority of the population (95.5%), whereas females constituted 4.5%. Nearly 59.7% of the population were in the age range of 50–59 years because majority of the employees were permanent recruits working with the government organization and hence, as in a major government setup, the employees are permanently employed, thus resulting in a major population of elderly.

Majority of the population (53.55%) had only primary schooling as the educational qualifications; this finding could be attributed to the fact that majority of the employees were in the maintenance department, for which only basic education is required. Almost 7.4% of males had postgraduation, whereas 40.6% of females were postgraduates; this was primarily due to employment of women in the office and that of men in the field operations.

Nearly 34.4% of males and 19% of females had more than one habit, which can be directly correlated with the educational status, thereby further emphasizing the need for education. This is in accordance with that found by Zhu *et al.* in 1996 who found that, after 11 years of education, the likelihood of smoking decreased and that

**Table 2: Association of habits with awareness and symptoms in males**

Males Habits	Awareness			Symptoms			Total Score	
	Mean	SD	P	Mean	SD	P	Mean	SD
Smoking	13.51	1.685	0.005	10.55	0.687	0	29.41	2.065
Cigarettes	13.3	1.874		10.77	1.569		31.19	3.211
Chewing Tobacco	13.47	1.706	0.013	10.52	0.658	0	29.35	2.002
Eating Pan Masala	13.65	1.721		11.14	1.749		32.26	3.198
Consume Alcohol	13.47	1.7	0.243	10.51	0.634	0	29.34	1.977
	13.55	1.775		11.08	1.709		31.88	3.292
	13.5	1.704	0.002	10.54	0.701	0	29.43	2.094
	13.26	1.744		10.95	1.748		31.75	3.289

of smoking cessation increased with each successive year of education.<sup>[13,14]</sup>

Nearly 10.7% of males and 1% of females had the habit of tobacco chewing, and 11.3% of males had the habit of smoking compared to 1% of women. This could be due to the social stigma associated with chewing and smoking of tobacco in women in India. Earlier studies have shown that smokeless tobacco consumption is the most common addiction. A logical explanation for this could be that it can be easily consumed at the place of work without creating a negative impact on the work profile, or any adverse reactions from colleagues or seniors.<sup>[15]</sup>

We found statistically significant difference between habits and symptoms [Table 2] and also between habits, age, and awareness.

## CONCLUSION

It is worth mentioning the fact that the extent of ignorance about the link between tobacco and cancer was a surprising fact. Raising the question if other facts played a role here like denial is worthy of exploration as it may help plan more effective prevention and early detection strategies.

Even though anecdotal, our experience is that those addicted to tobacco do not necessarily stop using it even if exposed to cancer, highlighting the fact that tobacco addiction needs strategies similar to alcohol and drug addiction.

This cohort evaluated was belonging to the lower socio-economic status, uncertain work timings and a higher work pressure that might lead to the reason for a person to succumb to the habit of tobacco consumption

## Scope for further study

- To carry out a survey keeping the baseline of gender and educational qualifications equal
- The second stage of the study involves improving awareness using pamphlets and handouts. Deaddiction program for those with tobacco and alcohol abuse habits and clinical evaluation of persons in the high-risk habit group

- Re-administration of the questionnaire after 6 months to the same population to evaluate the effect of awareness created by use of handouts and de-addiction programmes

## Limitations of the study

- Uneven gender distribution may lead to a gender bias
- There was a difference in the educational qualification which could also have led to the above findings.

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## Conflicts of interest

There are no conflicts of interest.

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