# Knowledge Regarding Oral Cancer: A Descriptive Study to Assess the Knowledge Regarding Oral Cancer among the Adults in a Selected Urban Community of Guwahati, Assam

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**Abstract:** *Background: Oral cancer is the most frequently encountered neoplasm among head and neck cancers and originates from the squamous epithelium lining of the oral cavity. Any problem that affects the mouth can make it hard to eat or drink such as cold sores, canker sores, thrush, gum or tooth problems, dry mouth, bad breath, leukoplakia and oral cancer. Objectives: To assess the knowledge regarding oral cancer among the adults in a selected urban community of Guwahati, Assam. Materials and methods: The study adopted a non-experimental descriptive research design, 135 adults residing in a selected urban community of Guwahati, Assam were recruited as sample of the study using multistage random sampling technique. The tool used for the study are demographic variables and self - structured knowledge questionnaire. Data were analyzed by using descriptive and inferential statistics. Results: The findings of the study revealed that, out of 135 adult's majority 100 (74.1%) of the adults had inadequate knowledge, 33 (24.4%) have moderate knowledge and 2 (1.5%) have adequate knowledge regarding oral cancer. The mean score of the level of knowledge was 8.82 and the standard deviation was 2.40. There was significant association of knowledge regarding oral cancer among adults with selected demographic variables and clinical variables. Conclusion: The study concluded that knowledge regarding oral cancer among the adults was inadequate. Therefore, educational programs are needed to improve such knowledge.*

**Keywords:** Assess, Knowledge, Oral cancer, Adults, Urban community

## 1. Introduction

The mouth also called the buccal cavity or oral cavity is the major part of the digestive system comprising of the lips, vestibule, mouth cavity, gums, teeth, hard and soft palate, tongue of salivary glands. The mouth is an oval shaped cavity which starts at the lips and ends at the throat.1

Cancer is Latin word from the Greek word "Karkinos" meaning curmudgeon or crab, denoting how carcino - ma extends its claws like a crab into the adjacent tissues.2

Globally oral cancer is the sixth most common type of cancer with India contributing to almost one - third of the total burden and the second country having the highest number of oral cancer cases.3

According to American Cancer Statistics, the average age of people who receive an oral cancer diagnosis is 64 and most recent estimates for oral cavity and oropharyngeal cancer in the United States for 2023 were about 54, 540 new cases of oral cavity and oropharyngeal cancer.4

## 2. Literature Survey

**Section I: Study related to the incidence and prevalence of oral cancer**

**Aamod DS, Vidsted P, Kallestrup P, Neupane D (2019)** conducted a study to review prevalence and incidence of oral cancer in low and middle income countries including sample sizes ranging from 486 to 101, 761 with 213, 572 persons using different studies criterion such as original studies, reporting of prevalence or incidence rates, population based studies and many more. The result shows that incidents is likely to rise in the region where gutkha, pan - masala, pan - tobacco are popular. The study concluded that this review contributes to useful information on prevalence and incidence estimates of oral cancer in Low and medium income countries.5

**Section II: Study related to the knowledge regarding oral cancer**

**Bin M, Turki M (2021)** conducted a cross sectional study to assess knowledge and awareness with regard to oral cancer and its risk factors among 343 medical and dental students at Majmaah University, Saudi Arabia. The samples were selected by using simple random sampling technique and a structured questionnaire. The result shows that out of 343 samples, 53% of students had moderate knowledge, 12% had good knowledge, 29% had poor knowledge and 61% had no knowledge that human papilloma virus was a risk factor. The study concluded that students have insufficient knowledge about oral cancer and its risk factors, particularly its relationship with human papilloma virus infection.6

## 3. Problem Definition

A study to assess the knowledge regarding oral cancer among the adults in a selected urban community of Guwahati, Assam.

## 4. Methods / Approach

In this study, Quantitative Research Approach was used. Non - Experimental descriptive research design was adopted for the study. In the study, 135 adults of an urban community under East Zone of Satgaon, Guwahati, Assam were selected by using non-probability purposive sampling technique. The tool used for the study were demographic variables, clinical variables and self - structured knowledge questionnaire using interview method.

In order to determine the content validity, the research tools was given to five experts from the field of Medical Surgical Nursing and Community Health Nursing. The initial tools were developed in English. Then the tools demographic variables, clinical variables and self - structured knowledge questionnaire were translated into Assamese by an expert of Assamese department. The reliability of the self - structured knowledge questionnaire was established by split half method and was calculated using Karl Pearson Coefficient Correlation formula. The analysis was done by using both descriptive and inferential statistics in terms of mean, standard deviation, frequencies, percentages and chi - square test.

## 5. Results / Discussion

**Table 1:** Frequency and percentage distribution of demographic variables, n = 135

| Demographic Variables | Group | Frequency (f) | Percentage (%) |
|---|---|---|---|
| Age In Years | 20 - 30 | 76 | 56.2% |
| | 31 - 40 | 31 | 22.9% |
| | 41 - 50 | 17 | 12.5% |
| | 51 - 60 | 11 | 8.14% |
| Gender | Male | 72 | 53.3% |
| | Female | 63 | 46.6% |
| Religion | Christianity | 0 | 0% |
| | Hinduism | 6 | 4.5% |
| | Islamic | 129 | 95.5% |
| | Others | 0 | 0% |
| Educational Status | Illiterate | 36 | 26.7% |
| | Below HSLC | 49 | 36.3% |
| | HSLC | 27 | 20% |
| | HSSLC | 13 | 9.62% |
| | Graduate or above | 10 | 7.4% |
| Occupation | Business | 44 | 32.5% |
| | Service | 3 | 2.3% |
| | Student | 14 | 10.3% |
| | Farmer | 20 | 14.8% |
| | Daily wager | 17 | 12.5% |
| | Housewife | 37 | 27.4% |
| Family Income | Upper Class – 1, 00, 000 and above | 0 | 0% |
| | Upper Middle Class – 50, 000 - 99, 000 | 3 | 2.3% |
| | Middle Class – 30, 000 - 49, 000 | 33 | 24.4% |
| | Lower Middle Class –15, 000 - 29, 000 | 39 | 28.8% |
| | Lower Class <15, 000 | 60 | 44.4% |
| Type of Family | Nuclear | 96 | 71.1% |
| | Joint | 38 | 28.1% |
| | Extended | 1 | 0.74% |

| | Married | 98 | 72.5% |
|---|---|---|---|
| Marital Status | Unmarried | 35 | 25.9% |
| | Widow/Widower | 2 | 1.48% |
| | Divorced | 0 | 0% |
| | Mass media | 45 | 33.3% |
| | Friends | 30 | 22.2% |
| Source of Information | Relatives | 56 | 41.4% |
| | Medical staff (Physician and nurse) | 4 | 2.96% |
| | Others | 0 | 0 |

**Table 2:** Frequency and percentage distribution of clinical variables, n = 135

| Clinical Variables | Group | Frequency (f) | Percentage (%) |
|---|---|---|---|
| Habit of chewing tobacco | Yes | 43 | 31.8% |
| | No | 92 | 68.4% |
| Habit of chewing betel nut | Yes | 45 | 33.3% |
| | No | 90 | 66.7% |
| Habit of Smoking | Yes | 26 | 19.3% |
| | No | 109 | 80.7% |
| Non - healing ulcers/ulcers in mouth | Yes | 4 | 2.9% |
| | No | 131 | 97.3% |
| Family history of oral cancer | Yes | 4 | 2.9% |
| | No | 131 | 97.3% |

**Table 3:** Frequency, percentage, mean and standard deviation of level of knowledge of adults regarding oral cancer, n = 135

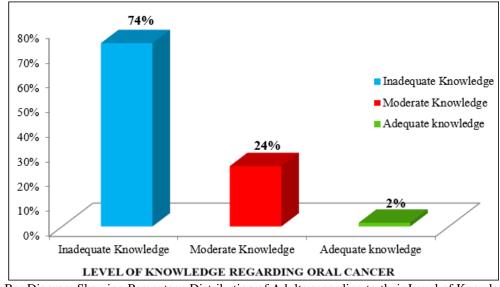| Level of Knowledge | Score | Frequency (f) | Percentage (%) | Mean | SD |
|---|---|---|---|---|---|
| Inadequate Knowledge | 0 - 10 | 100 | 74.1% | | |
| Moderate Knowledge | 11 - 15 | 33 | 24.4% | 8.82 | 2.40 |
| Adequate knowledge | 16 - 20 | 2 | 1.5% | | |
| **TOTAL** | **20** | **135** | **100** | | |



**Figure 1:** Bar Diagram Showing Percentage Distribution of Adults according to their Level of Knowledge, n=135

**Table 4:** Chi square test showing the association between level of knowledge regarding oral cancer among the adults with selected demographic variables, n = 135

| Demographic Variables | Group | Level of knowledge | | | Chi Square | df | P Value |
|---|---|---|---|---|---|---|---|
| | | Inadequate Knowledge | Moderate Knowledge | Adequate Knowledge | | | |
| Age | 20 - 30 | 55 | 20 | 1 | 7.13 | 8 | .52$^S$ |
| | 31 - 40 | 23 | 7 | 1 | | | |
| | 41 - 50 | 16 | 1 | 0 | | | |
| | 51 - 60 | 6 | 5 | 0 | | | |
| Gender | Male | 54 | 17 | 1 | .07 | 2 | .96$^{NS}$ |
| | Female | 46 | 16 | 1 | | | |
| Religion | Christianity | 0 | 0 | 0 | .68 | 4 | .95$^{NS}$ |
| | Hinduism | 5 | 1 | 0 | | | |
| | Islamic | 95 | 32 | 2 | | | |
| | Others | 0 | 0 | 0 | | | |

**Volume 13 Issue 3, March 2024**
**Fully Refereed | Open Access | Double Blind Peer Reviewed Journal**
**www.ijsr.net**

Paper ID: ES24318121523      DOI: https://dx.doi.org/10.21275/ES24318121523      1227

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Educational status | Illiterate | 29 | 6 | 1 | 13.31 | 8 | .10$^S$ |
| | Below HSLC | 37 | 12 | 0 | | | |
| | HSLC | 22 | 5 | 0 | | | |
| | HSSLC | 7 | 6 | 0 | | | |
| | Graduate or above | 5 | 4 | 1 | | | |
| Occupation | Business | 31 | 13 | 0 | 9.06 | 12 | .69$^S$ |
| | Service | 2 | 1 | 0 | | | |
| | Student | 9 | 5 | 0 | | | |
| | Farmer | 18 | 1 | 1 | | | |
| | Daily wager | 13 | 4 | 0 | | | |
| | Housewife | 27 | 9 | 1 | | | |
| Family income | Upper class – 1, 00, 000 and above | 0 | 0 | 0 | 4.58 | 8 | .80$^S$ |
| | Upper middle class - 50, 000 - 99, 000 | 1 | 2 | 0 | | | |
| | Middle Class – 30, 000 - 49, 000 | 25 | 7 | 1 | | | |
| | Lower Middle Class –15, 000 - 29, 000 | 29 | 10 | 0 | | | |
| | Lower Class <15, 000 | 45 | 14 | 1 | | | |
| Type of family | Nuclear | 69 | 26 | 1 | 1.83 | 4 | .76$^S$ |
| | Joint | 30 | 7 | 1 | | | |
| | Extended | 1 | 0 | 0 | | | |
| Marital status | Married | 76 | 20 | 2 | 3.97 | 4 | .40$^S$ |
| | Unmarried | 23 | 12 | 0 | | | |
| | Widow/ Widower | 0 | 0 | 0 | | | |
| | Divorced | 1 | 1 | 0 | | | |
| Source of information | Mass media | 31 | 13 | 1 | 1.54 | 6 | .95$^S$ |
| | Friends | 23 | 7 | 0 | | | |
| | Relatives | 43 | 12 | 1 | | | |
| | Medical staff (Physician and nurse) | 3 | 1 | 0 | | | |

The present study revealed that there was no significant association between knowledge regarding oral cancer among the adults with selected demographic variables with respect of gender and religion but there was significant association between knowledge regarding oral cancer among the adults with selected demographic variables with respect of age, educational status, occupation, family income, type of family, marital status and source of information at 0.05 level of significance. Hence the research hypothesis was accepted and null hypothesis was rejected. Therefore, it can be concluded that the knowledge regarding oral cancer among adults is dependent of their demographic variables.

**Table 5:** Chi square test showing the association between knowledge regarding oral cancer among the adults with selected clinical variables, n = 135

| Clinical Variables | Groups | Level of knowledge | | | Chi Square | df | P Value |
|---|---|---|---|---|---|---|---|
| | | Inadequate Knowledge | Moderate Knowledge | Adequate Knowledge | | | |
| Habit of chewing tobacco | Yes | 32 | 11 | 0 | .96 | 2 | .61$^S$ |
| | No | 68 | 22 | 2 | | | |
| Habit of chewing betel nut | Yes | 31 | 14 | 0 | 2.47 | 2 | .29$^S$ |
| | No | 69 | 19 | 2 | | | |
| Habit of smoking | Yes | 20 | 5 | 1 | 1.60 | 2 | .44$^S$ |
| | No | 80 | 28 | 1 | | | |
| Non - healing ulcers/ ulcers in mouth | Yes | 4 | 0 | 0 | 1.44 | 2 | .48$^S$ |
| | No | 96 | 33 | 2 | | | |
| Family history of oral cancer | Yes | 3 | 1 | 0 | .06 | 2 | .96$^{NS}$ |
| | No | 97 | 32 | 2 | | | |

*\* S - Significant at 0.05 level of significance \* NS - Not Significant at 0.05 level of significance*

The present study revealed that there was no significant association between knowledge regarding oral cancer among the adults with selected clinical variable with respect of family history of oral cancer but there was significant association between knowledge regarding oral cancer among the adults with selected clinical variables with respect of habit of chewing tobacco, habit of chewing betel nut, habit of smoking and non - healing ulcers/ulcers in mouth at 0.05 level of significance. Hence the research hypothesis was accepted and null hypothesis was rejected. Therefore, it can be concluded that the knowledge regarding oral cancer among the adults is dependent of their clinical variables.

## 6. Conclusion

The study concluded that knowledge regarding oral cancer among the adults in selected urban community of Guwahati, Assam was inadequate. Therefore, there is a need to increase awareness in the community through educational programmes so that it will be helpful in early detection and diagnosis of oral cancer and also to improve such knowledge and changes in dietary habits to prevent from oral cancer.

## 7. Future Scope

- A similar study can be replicated on a large scale for wider generalizations.

### Volume 13 Issue 3, March 2024
**Fully Refereed | Open Access | Double Blind Peer Reviewed Journal**
**www.ijsr.net**

Paper ID: ES24318121523　　　DOI: https://dx.doi.org/10.21275/ES24318121523　　　1228

- A study can be conducted on assessing the attitude regarding prevention of oral cancer.
- An observational study regarding practice of prevention of oral cancer can be conducted.
- A similar study can be undertaken in hospital setting

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**Volume 13 Issue 3, March 2024**
**Fully Refereed | Open Access | Double Blind Peer Reviewed Journal**
**www.ijsr.net**

Paper ID: ES24318121523                    DOI: https://dx.doi.org/10.21275/ES24318121523                    1229