

# Knowledge Assessment of Undergraduate Dental Students about Oral Cancer -An Institutional Study.

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## ABSTRACT

**Background:** Oral cancer is one of the leading cause of death in Indian subcontinent. Early detection will definitely reduce its mortality rate. **Aims and Objectives:** To assess knowledge of undergraduate dental students about oral cancer. **Methods:** A cross-sectional, questionnaire with 10 questions related to basic aspects of oral cancer was designed and distributed to 100 undergraduate students from January 2015 to June 2015. The data was collected, tabulated and analyzed statistically for number and percentage using EPI-Info statistical software version 6. **Results:** Most of the students assessed were females making to 60% (60), while males were only 40% (40). 49 females and 32 males routinely check the oral mucosa completely. 56 females and 34 males ask the patients about their personal history like habits of tobacco and alcohol. **Conclusion:** Even though most of the students had adequate knowledge regarding basics of oral cancer, curriculum should be revised in such a way to enhance the knowledge of students about oral cancer.

**Keywords:** Dental students, Knowledge, Oral Cancer, Tobacco.

## INTRODUCTION

Recently the incidence of oral cancer is increasing to an alarming level, especially in developing countries. Squamous cell carcinoma (SCC) makes about 95 % of oral cancers.<sup>[1]</sup> Tobacco consumption with or without alcohol have been proved to be the main etiologic agents of SCC, which is avoidable.<sup>[2,3]</sup> Even though SCC can easily be detected in routine oral examinations, lack of knowledge of doctors compounded by patients negligence, results in the detection of cancer at later stages, thus reducing the survival rates. Detection of SCC at initial stages reduces the morbidity and mortality rates, thus necessitating proper training to the dental students regarding oral cancer.<sup>[4,5]</sup> We carried out our study to assess the basic knowledge of undergraduate dental students regarding oral cancer.

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## MATERIALS AND METHODS

A questionnaire based cross-sectional study was conducted at S.B Patil Dental College and Hospital, Bidar, Karnataka, India, for a period of six months (January 2015 to June 2015) after obtaining approval from Institutional Ethics Committee. The study was carried out in 100 undergraduate dental students of 3rd year, 4th year and internees. Simple random sampling method was used to obtain the sample, with a sampling error of 5% and a confidence interval of 95%, evenly distributed between the surveyed periods. A good rapport was established with the students. They were explained the purpose of study and prior written informed consent was obtained from all of them. They were informed about the confidentiality of the information collected, so as to get more reliable answers from them. A self-administered questionnaire containing 10 questions relating to the basic knowledge of oral cancer was designed. The data was collected, tabulated and analyzed statistically for number and percentage using EPI-Info statistical software version 6.

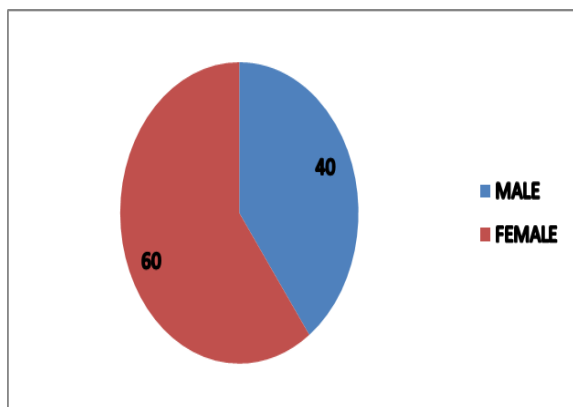
## RESULTS

The response of the students regarding basic aspects of oral cancer has been tabulated [Table 1- 4, Graph 1- 4].

Out of total 100 students, 60 (60%) were females and 40 (40%) were males [Table1, Graph 1].

**Table 1:** Distribution of Students Gender wise.

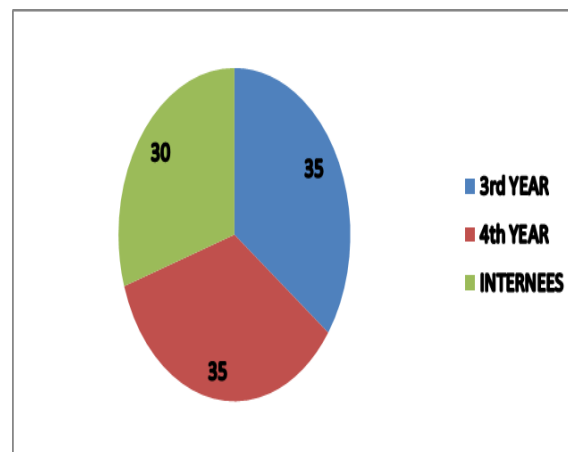
Gender	Number	Percentage
Male	40	40%
Female	60	60%
Total	100	100%



Graph 1: Distribution of Students Gender wise.

Table 2: Distribution of Students Year Wise.

Year of Study	Number	Percentage
3 <sup>rd</sup> Year	35	35%
4 <sup>th</sup> Year	35	35%
Internees	30	30%

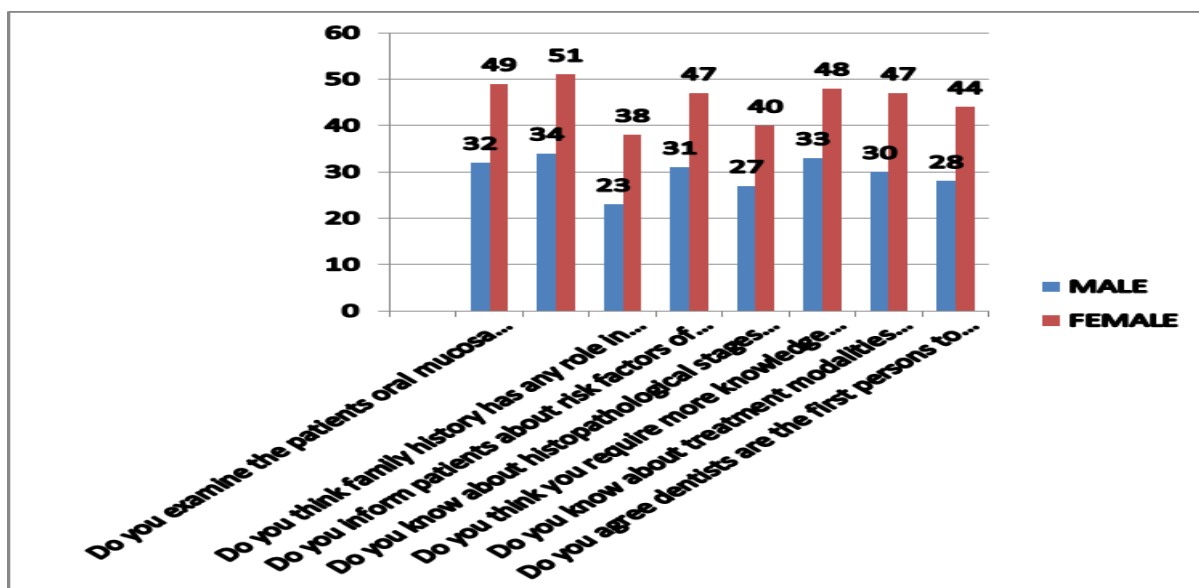


Graph 2: Distribution of Students Year wise.

Out of total 100 students, 30 (30%) were internees and 35 (35%) were 3rd and 4th year each [Table2, Graph 2].

Table 3: Knowledge of students about Oral Cancer in Number and Percentage.

S.NO	Question	Male		Female	
		Yes	No	Yes	No
1	Do you examine the patients oral mucosa routinely	32	8	49	11
2	Do you ask the patients about their personal history like habits	34	6	51	9
3	Do you think family history has any role in cause of oral cancer	23	17	38	22
4	Do you inform patients about risk factors of oral cancer	31	9	47	13
5	Do you know about histopathological stages of oral cancer	27	13	40	20
6	Do you think you require more knowledge about diagnostic methods of oral cancer	33	7	48	12
7	Do you know about treatment modalities available to treat oral cancer	30	10	47	13
8	Do you agree dentists are the first persons to identify oral cancer	28	12	44	16



Graph 3: Knowledge of students about Oral Cancer in Number and Percentage.

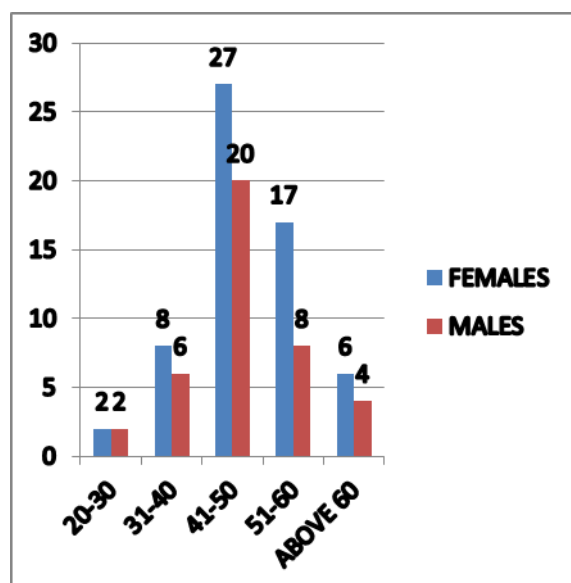
## DISCUSSION

Among cancers affecting head and neck region, Oral squamous cell carcinoma (OSCC) is most

common one making more than 90% cases. The percentage of oral cancer cases was found to be more in Indian subcontinent. It has multifactorial aetiology, with tobacco being the main causative agent.<sup>[6-9]</sup>

**Table 4:** Age of occurrence of OSCC.

Age Range (Years)	Females	Males
20-30	2 (3.33%)	2 (5%)
31-40	8 (13.33%)	6 (15%)
41-50	27 (45%)	20 (50%)
51-60	17 (28.33%)	8 (20%)
Above 60	6 (10%)	4 (10%)
Total	60	40



**Graph 4:** Age of occurrence of OSCC.

Dental surgeons are the first persons who have opportunity to determine oral cancers at early stage even in asymptomatic patients before it reaches advanced stages and spreads to other sites. It is the responsibility of dental institutions to focus the curriculum so that students should have an adequate knowledge about oral cancer. Even though postgraduate students are taught in detail about oral cancer, it is vital for undergraduate students to attain sufficient knowledge regarding current concepts and latest research activities of this commonest malignant disease.<sup>[10-14]</sup>

Out of total 100 students, 60 (60%) were females and 40 (40%) were males. Our findings are similar to Soares et al, Bhagavathula et al and Venkat Rao et al. The high percentage of females might be due to the more number of girl students taking admissions in to the medical and dental colleges.<sup>[1,3,7]</sup>

Our study showed that 49 (81.66 %) females and 32 (80%) males routinely check the oral mucosa completely, making to 81% of students. This finding is in accordance with Bhagavathula et al and Carter et al who found 100 % and 99% of their

subjects respectively, check oral mucosa routinely.<sup>[3,4]</sup>

We found that 56 (96.33%) females and 34 (85 %) males ask the patients about their personal history like habits of tobacco and alcohol, making to 90% of students. This finding is in accordance with Kumar and Harshini, who found all the students (100%) take personal history and Okoh and Enabulele, found 96.7 % of students take habit history.<sup>[2,8]</sup> This might be due to the fact that most of the students have knowledge about the role of tobacco and alcohol in causing oral cancer. Whereas Fotedar et al in their study found only 67.7% of students took history about the use of tobacco and alcohol.<sup>[9]</sup>

Our study found that 61 % of students (23 males and 38 females) evaluate family history in oral cancer patients. However Kumar and Harshini found 86 % of students take family history and Anderson Rocha-Buelvas et al found 22.58% evaluate family history of cancer.<sup>[2,10]</sup>

78% of students inform patients about the risk factors of oral cancer. However Kumar and Harshini found only 33 % of students inform their patients about the risk factors, whereas Bhagavathula et al found 98.2% students inform.<sup>[2,3]</sup> 67% of subjects informed that they had knowledge about histopathological stages of OSCC.

81% of our subjects think that they require more knowledge about diagnostic methods of oral cancer and require additional training/information regarding oral cancer. Our findings are comparable to 90% as reported by Carter et al and 94.6% according to Fotedar et al and in contrast Bhagavathula et al found only 39% of their subjects think that have sufficient knowledge about oral cancer.<sup>[3,4,9]</sup>

77 % of our students know about different treatment modalities available to treat oral cancer, whereas Kumar and Harshini found that 84 % know about treatment options. Thus there is a need for continuing dental education on oral cancer diagnostic procedures, treatment modalities and prevention.<sup>[2,14,15]</sup>

72 % of students agree that dentists are the first persons to identify oral cancer. Whereas Kumar and Harshini found that 100 % of their subjects were of opinion that dentists identify oral cancer first.

38% students refer the patients to dental specialists and 62 % refer to medical oncologists. Whereas in a study by Kumar and Harshini, 36 % students were not aware whom they should refer oral cancer patients. However Bhagavathula et al found that 91.2% of students refer to dental specialists and only 8.8% refer to medical oncologists.<sup>[2,3]</sup>

We found that 47 % of students believe that oral cancer most likely occurs in patients aged between 41 to 50 years.

We suggest for a need of increased public awareness and increased knowledge of undergraduate dental students to improve cancer survival rates. Hence governments should take initiative measures to revise the curriculum of dental students so that everyone should possess adequate knowledge about oral cancer.

## CONCLUSION

While the fundamental knowledge of the undergraduate students on the subject of oral cancer is good, it is not sufficient enough to cure as well as prevent this appalling disease. All the undergraduate students should be taught in detail about screening, risk factors, clinical and histopathological features along with treatment options of oral cancer in order to reduce its morbidity and mortality are likely to be reduced.

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