



Awareness of Ill Effects of Tobacco on Oral Cavity among Nursing Students and Staff- A questionnaire-based study

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KEYWORDS

Nurses, Tobacco, Precancerous lesions, Oral cancer.

ABSTRACT:

Introduction: Cancer is a leading cause of morbidity and mortality worldwide, with oral cancer particularly prevalent in India due to diverse cultural, geographical factors, and addictive habits. The burden of cancer in India presents significant challenges for prevention and control, necessitating improved quality of life through early detection. Oral cancer often develops from precancerous lesions, making early recognition crucial for better prognosis. Nurses have a key role in early cancer detection, particularly through oral health checks during hospital admissions.

Objectives: This study aimed to assess the awareness of oral cancer, focusing on nursing students' and staff's knowledge of risk factors, types, clinical signs, and screening methods, to determine their ability to provide oral cancer screening services.

Methods: A cross-sectional, observational, and descriptive survey was conducted among 241 nursing students and staff using a close-ended questionnaire distributed via Google Forms. The data collected were analyzed based on frequency (Yes/No) responses.

Results: Of the 254 students, 241 participated, resulting in a 90% response rate. The majority of participants were female (90.5%). 30% of students were unaware that quitting tobacco could reverse oral cavity damage, and 31% lacked knowledge of precancerous oral lesions. Overall, awareness about the harmful effects of tobacco on oral health was low among participants.

Conclusions: The study highlights the need for increased awareness and education about oral cancer and precancerous conditions among nurses, which would facilitate effective oral cancer screening during hospital admissions.

1. Introduction

Globally, oral cancer ranks sixth among all types of cancer. ^[1] Oral cancer mainly affects individuals in the 6th and 7th decades of life with a history of smoking, tobacco chewing and, or alcohol consumption. Although many people are aware that tobacco harms their health, most still accept smoking as part of their daily life, unaware that more than 60 toxic chemicals including carcinogens and cancer promoting substances, in tobacco can invade the body's various systems. Oral squamous cell carcinoma (OSCC) commonly results from oral potentially malignant disorders (OPMDs). Early

recognition and referral are essential for better 'quality of life'.

Nursing staff provide health care for the patient population in hospital. Therefore, admission to hospital provides an 'opportunity' for 'screening' for oral disease. It is important that nursing staff are aware of the risk factors and clinical signs of oral cancer as they spend the maximum time in patient care in a hospital making it essential that they are well informed about the risk factors and clinical signs of oral cancer. Visual screening of oral cavity in high-risk patients can alone prevent around 40000 deaths from oral cancer worldwide every year. ^[2] Nursing students conducts camps with medical



hospital but this relation with dental hospitals is lacking thus promotion of collaborative oral healthcare is required.

There are various studies on awareness of oral cancer among dental and medical students⁽³⁻⁶⁾, however the data on awareness of ill effects of tobacco on oral cavity and oral cancer in nursing students are scarce. This is the first study in Maharashtra assessing knowledge amongst nursing students and staff about ill effects of tobacco on oral cavity also awareness about precancerous lesion & oral cancer. Present study questioned nursing student and staff in the Mumbai region on their awareness of oral cancer, its risk factors and signs with the objective to study and evaluate the awareness and knowledge about ill effects of Tobacco in oral cavity amongst the Nursing students and staffs and to assess their different knowledge screening methods.

2. Objectives

The objective of this study was to assess the awareness of oral cancer, focusing on nursing students' and staff's knowledge of risk factors, types, clinical signs, and screening methods, to determine their ability to provide oral cancer screening services.

3. Methods

Ethical approval was obtained from institutional review board. (GDCH Mumbai/Ethical Committee/4090/2023). Study was conducted amongst nursing students and staff during Jan 2023- Feb 2023. Questionnaire containing 20 questions was formed. Face validity and content validity was done by the subject experts. This questionnaire consisted of personal and sociodemographic details (Q1-5) and closed-ended questions for assessing awareness of risk factors, signs of oral precancer and treatment outcome (Q6-20). The questionnaire assessed; awareness, knowledge about risk factors for oral precancer and cancer and screening methods. (appendix A)

Questionnaire was converted into Google Forms. After providing comprehensive briefing about objective of the study to the students the questionnaire was circulated through Whatsapp amongst five Nursing colleges in Mumbai, Maharashtra (St George Hospital, GT hospital, CAMA Hospital & J.J hospital & Institute of nursing). Participants who expressed voluntary consent were included in the study. The circulated amongst the

students studying in 1st to 3rd year of Bachelor of Nursing independent of gender or levels of experience and nursing staff.

Statistical Analysis:

The data gathered from the questionnaire was subjected to analysis employing descriptive statistical method, facilitated through MS Excel(version2016). See appendix A for questionnaire.

4. Results

Out of 254 students, 241 participated in the study giving a response rate of (95%). Most of the participants were females (n=218, 90.5%) and 23 males (9.5%) (Fig 1). 210 Students and 31 staffs participated. College wise response is summarised in fig 2. 30%(n=72) students were not aware that stoppage of Tobacco might revert effects on Oral Cavity. 31%(n=86) were unaware about Precancerous Lesions of Oral Cavity. 46%(n=111) nursing population did not know how screening can be done for Oral Cancer. The summary of responses is mentioned in Table 1

5. Discussion

India has the largest number of oral cancer cases and one third of the total burden of oral cancer globally. Nurses hold a vital role in prevention and Early detection of Oral Cancer.Hence it is important that nursing staff are aware of the risk factors and clinical signs of oral precancer and cancer.

Very few studies are conducted amongst the Nursing population regarding oral precancer & cancer screening & ill effects of Tobacco on Oral cavity. 76%(n=184) had knowledge about different forms of Tobacco & 91.7%(n=221) were aware that it affects soft tissue structure surrounding teeth but 39% (n=96) had no knowledge about reverse smoking. Reverse smoking causes high-risk lesions in the hard palate of reverse smokers.⁽⁷⁾

Present study showed 30% were unaware that stoppage of habit helps in revert back of symptoms of oral cancer. 35% nursing students & staff had no knowledge about precancerous lesions of oral cavity. Knowing about precancerous lesions becomes essential as nurses can play role in patient awareness and motivate



them for stoppage of habit. This would prevent transformation of precancerous lesions into oral cancer. Our study showed that awareness about Ill Effects of Tobacco on oral Cavity among Nursing Students and Staff was poor, imparting a need for improved Education of Nurses towards Precancer and Oral Cancer. Similar study was conducted by CARTER M et al (2009)⁽⁸⁾ regarding oral cancer awareness amongst Nursing Staff in UK and Keshwar S et al 2010⁽⁹⁾, Mittal et al (2013)⁽¹⁰⁾ and results were quite similar.

Previous studies undertaken^(11,12) showed less than 40% of nurse practitioners were adequately trained to examine oral cavity for potential cancerous lesion. Our study showed 46% (n=111) did not know how screening can be done for Oral Cancer. 73% (n=176) of nursing population had never attended oral cancer screening camp. Lack of awareness and knowledge may prohibit Nurses from delivering preventive advice.

The 5162 Indian Nursing Council-approved institutions in India train nurses via various courses.⁽¹³⁾ Nursing curriculum should give emphasis on oral disease screening as primary prevention is the most cost-effective prevention programme and promote collaborative oral healthcare. It is suggested that good collaborative oral healthcare comes from inter-professional education since it provides training and teamwork experience especially given early and regularly during their education.⁽¹⁴⁾ The habit of examining oral cavity for early symptoms of oral cancer and referring them to the dentist should be encouraged among nursing students from time to time.

Limitations:

No. of participants were less (241) i.e. 95% which included Students from four Nursing Institutes of Mumbai City. The study has to be done on wider population considering Students from different parts of the country considering Major burden on the health care system.

Future scope:

Result of the study can help in modifying the curriculum of nursing student thus helping them to understand risk factors and screening methods pertaining to oral cancer. Promotion of collaborative oral healthcare is required.

Conclusion:

Awareness on precancerous lesions and knowledge about risk factors of oral Cancer is suboptimal in nursing

students and staff. Provision of certified courses or structured curriculum including oral cancer screening methods may contribute in reduction of raising numbers of oral cancer in India. These efforts with referral to oral cancer screening are vital for decreasing oral cancers. Morbidity and Mortality rates and decrease burden on economy.

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