



KNOWLEDGE AND PREVALENCE OF ORAL CANCER SCREENING PRACTICES AMONG THE HOSPITAL BASED NURSING STAFFS IN CHENNAI CITY

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ABSTRACT

Introduction Oral cancer is a major public health problem and a leading cause of morbidity and mortality worldwide. Its prevalence is highest in South Asian countries like Bangladesh, India, Sri Lanka, etc. and is attributed to increased use of tobacco and its products. In India, oral cancer contributes to 50% of all the cancer cases detected. The top priority to reduce the incidence of oral cancer is primary prevention. To prevent Oral Cancer, all the health care providers having accessibility to the oral cavity of a patient needs to have a basic knowledge about its risk factors and early symptoms. This study was conducted to evaluate the knowledge regarding the risk factors of oral cancer and screening procedures among the nursing fraternity working in the hospitals of Chennai City. **Material methods** A total of 80 nursing staff were included in the study from various hospitals across Chennai. The Hospitals were selected using a systematic random sampling technique. The sample of nurses was randomly selected from the hospitals and nursing schools. Questionnaires regarding sociodemographic, oral cancer knowledge and proficiency were administered. Ward-based nurses working in hospitals across Chennai who are willing to participate in the survey **Results** A total of 80 nurses were included in the study; the mean age was 25.6 ± 7 . Table 1. Considering the qualification of the study population, it was seen that 71.25% had done their B.Sc. in nursing, and 13.75% had completed their postgraduation. And 1.25% had done their dental hygienist courses. 86.25% of the study population advised patients on the risk factors 13.75% did not inform patients on risk factors. 78.75% of them had received oral health care training in their nursing schools, and 21.25% did not receive any training. 55% had training in oral hygiene, 43.75% in oral health education, and 1.25% had received training in cleaning and root canal procedures. In this study, we found that 82.50% of the study population wanted more training in oral health care. 17.50% of them did not want any training programs. **Conclusion** Oral cancer is the most common cancer in developing countries. reducing the incidence of oral cancer in the population by bringing about awareness on the risk factors and importance of early diagnosis among all health care workers. Nurses' community being the largest among health care workers plays a crucial role. This study shows that further training is needed for nurses on oral care protocols.

KEYWORDS : Oral cancer,Prevalence,nurses ,awareness,oral health

INTRODUCTION

Oral cancer is a major public health problem and a leading cause of morbidity and mortality worldwide. Its prevalence is highest in South Asian countries like Bangladesh, India, Sri Lanka, etc. and is attributed to the increased use of tobacco and its products. In India, oral cancer contributes to 50% of all the cancer cases detected. Most common oral cancer is oral squamous cell carcinoma^{1,2}. Oral cancer risk factors include tobacco use, heavy alcohol consumption, and infection with certain strains of the Human Papillomavirus (HPV). Additionally, a diet low in fruits and vegetables, genetic predispositions, and immune suppression can further increase susceptibility to this disease. Understanding these risk factors is crucial for prevention and early detection strategies in at-risk populations. Squamous cell carcinoma (SCC) is the most common malignancy in the Oral Cavity. The top priority to reduce the incidence of oral cancer is primary prevention that includes adequate knowledge about the risk factors and early features of the disease. Its highly essential for all medical healthcare givers to have the knowledge on risk factors, clinical presentation, and various screening methods. Nursing staff forms major and plays an integral part in providing health care. Education and training on oral screening examinations of high-risk individuals, such as the elderly patients, chronic smokers and alcoholics, immune suppressant patients during routine care is essential for nursing staffs so, that oral cancer cases can be prevented or diagnosed in early stages^{3,4}. Lachlan M Carter Studies indicate that while many nurses recognize the importance of oral health checks, their knowledge of oral cancer risk factors and clinical signs is often inadequate. For instance, a study found that only 49% of nursing staff regularly performed oral health checks, and awareness of key signs like white patches was alarmingly low⁵. Additionally, many nurses reported insufficient education on

oral care for cancer patients, highlighting the need for enhanced training programs⁶. Improving education could empower nursing staff to play a vital role in oral cancer screening and management. As there is limited literature available regarding the awareness of nurses in diagnosis of oral cancer, this study was conducted to evaluate the knowledge regarding the risk factors of oral cancer and screening procedures among the nursing fraternity in Chennai city.

MATERIALS AND METHOD

A questionnaire-based study was conducted among 80 Nursing Staffs from various hospitals in Chennai. Hospitals were selected using a systematic random sampling technique. A sample of nurses was randomly selected from the hospitals and nursing schools. Questionnaires includes details on the socio demographics of the study subject and questions to assess knowledge about oral cancer risk factors and earl presentations. The questionnaires were pretested and validated before administering. Face and content validity of the questionnaire was done amongst expert faculties. Ethical approval was obtained from the Sathyabama Institution in humans Ethics Committee (Ref:396/IRB-IBSEC/SIST). Ward-based nurses working in hospitals across Chennai, who are willing to participate in the survey were the included in the study. Informed consent was obtained from the study subjects. The predesigned questionnaire carried 10 questions to assess oral examination habits, knowledge of oral cancer; its clinical appearance, and risk factors. The collected data were tabulated using Statistical Package for the Social Sciences version 17.0 software. Descriptive statistics was used to assess the knowledge and prevalence of screening procedures.

RESULTS

A total of 80 nurses were included in the study with the mean age was 25.6±7 Table 1. Considering the qualification of the study population it was seen that 71.255 had completed BSc nursing, 13.75% had completed postgraduation and 1.25% had completed dental hygienist course. About 11.25% of the study population had more than 5 years of experience, 62.50% had less than 3 years of experience and 17.50% had experience between 3 to 5 years (table3 figure1). The study participants were from different specialization wards like General ward (13.7%), ICU (5%), Medical ward(3.7%) Urology(3.7%), Cardiology(2.5%), Emergence(2.5%),Cardiac ICU(1.25%), Casualty(1.25%), Dental(1.25%), Labour(1.25%), Mental health nursing(1.25%), MICU(1.25%), OG(1.25%), Oncology(1.25%), Orthopedic(1.25%), Pedodontics and preventive dentistry(1.25%), Psychiatry(1.25%), Pulmonology and Surgical department (1.25%) . In the study, it was found that 67.50% carried out an oral health checks during patient's admission, 32.50% do not do oral examination during admission of the patient. Around 92.50% consider that examination of patient's mouth is important. Oral care protocol was followed in the unit in 71.25% of the participants, and was not available in 28.75% of their units. A mean of 53.85 ± 27.07 patients admitted in different wards required nursing assistance for oral hygiene maintenance. Among the study population, 37.50% had difficulties in carrying out regular oral health care for patients in their wards, 62.50% had no difficulty in carrying oral health care for the patients. About 86.25% regularly advised patients on risk factors for oral cancer and 13.75% did not advice about risk factors. Among the study population, 78.75% had received oral health care training at nursing school, 21.25% had not received any training, 55% had been trained on oral hygiene maintenance, 43.75% had dental health education and 1.25% had education on cleaning and root canal procedures. 82.50% of the nurses expects more training on oral health care. 58.75% of the study population considered smoking as the most common risk factor followed by alcohol. 16.2%. 5% of the study population also felt that nutritional deficiency was a risk factor, 3,75% ws aware that diet is a risk factor, 2.50% of them were aware that viruses and radiation as risk factors. About 86.25% of the study population advised patients on the risk factors, 13.75% did not inform patients on risk factors. In this study, we found that 82.50% of the study population wanted more training in oral health care. 17.50% of them did not want any training programs.

RESULTS:

Table 1: Descriptive analysis of age in study population (N=80)

Parameter	Mean ± SD	Median	Minimum	Maximum
Age	25.68 ± 7	22.00	20.00	45.00

Table 2: Descriptive analysis of qualification in the study population (N=80)

Qualification	Frequency	Percentages
B.sc nursing	57	71.25%
M.sc Nursing	11	13.75%
ANM	3	3.75%
DGNM	3	3.75%
Diploma	3	3.75%
B.sc Maths	1	1.25%
Dental hygienist	1	1.25%
GNM	1	1.25%

Table 3: Descriptive analysis of year of experience in hospital in the study population (N=80)

Year of experience in hospital	Frequency	Percentages
<3 years	50	62.50%
3 to 5 years	14	17.50%
>5 years	9	11.25%
No experience	7	8.75%

Figure : Bar chart of year of experience in hospital in the study population (N=80)

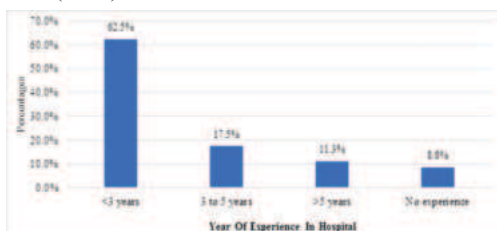


Table 4: Descriptive analysis of name of the department/ward in the study population (N=80)

Name Of The Department/Ward	Frequency	Percentages
Nursing	14	17.50%
General ward	11	13.75%
Bsc Nursing	8	10.00%
ICU	4	5.00%
Department of Nursing	3	3.75%
Medical ward	3	3.75%
Urology	3	3.75%
Cardiology	2	2.50%
Emergence department	2	2.50%
ER	2	2.50%
6th floor ward	1	1.25%
All ward	1	1.25%
B ward	1	1.25%
Cardiac Icu	1	1.25%
Casualty	1	1.25%
Casualty, ortho Ward,	1	1.25%
Causality	1	1.25%
Cluster	1	1.25%
Dental	1	1.25%
Icu casualty general ward	1	1.25%
ICU, ER, ward	1	1.25%
Labour	1	1.25%
Labour and ICU	1	1.25%
Mental health nursing	1	1.25%
MICU	1	1.25%
No	1	1.25%
Obst Gynic	1	1.25%
Oncology	1	1.25%
OPD.and ip	1	1.25%
Orthopedic	1	1.25%
Pedodontics and preventive dentistry	1	1.25%
Psychiatric department	1	1.25%
Pulmonology	1	1.25%
receptionist	1	1.25%
Staff nurse all departments	1	1.25%
Surgical department	1	1.25%
Surgical ward	1	1.25%
Urology post operative ward	1	1.25%

Table 5: Descriptive analysis of 1.do you carry out an oral health check during patient's admission? in the study population (N=80)

1.Do You carry out an oral health check during patient's admission?	Frequency	Percentages
Yes	54	67.50%
No	26	32.50%

Table 6: Descriptive analysis of 2.do you think it is important to examine a patient's mouth on admission? in the study population (N=80)

2.Do you think it is important to examine a patient's mouth on admission?	Frequency	Percentages
Yes	74	92.50%
No	6	7.50%

Table 7: Descriptive analysis of 3.does your ward have a mouth care protocol? in the study population (N=80)

3.Does your ward have a mouth care protocol?	Frequency	Percentages
Yes	57	71.25%
No	23	28.75%

Table 8: Descriptive analysis of 4. what percentage of patients on your ward requires nursing assistance with oral hygiene maintenance? (please specify) in study population (N=80)

Parameter	Mean ± SD	Median	Minimum	Maximum
4. What percentage of patients on your ward requires nursing assistance with oral hygiene maintenance? (please specify)	53.85 ± 27.07	50.00	2.00	100.00

Table 9: Descriptive analysis of 5.do you have any practical difficulties in carrying out regular oral health care for patients in your ward? in the study population (N=80)

5.Do you have any practical difficulties in carrying out regular oral health care for patients in your ward?	Frequency	Percentages
Yes	30	37.50%
No	50	62.50%

Table 10: What risk factors for oral cancer are you aware of? List all

Risk factors	Frequency	Percentages
Smoking and tobacco	47	58.75%
Alcohol	13	16.25%
Nutrients Deficiency	4	5.00%
Dietary factors	3	3.75%
Viral (HPV, radiation)	2	2.50%

Table 11: Descriptive analysis of 7.do you regularly advise patients about risk factors for oral cancer? in the study population (N=80)

7.Do you regularly advise patients about risk factors for oral cancer?	Frequency	Percentages
Yes	69	86.25%
No	11	13.75%

Table 12: Descriptive analysis of 8 .have you received any oral health care training at nursing school? in the study population (N=80)

8 .Have you received any oral health care training at nursing school?	Frequency	Percentages
Yes	63	78.75%
No	17	21.25%

Table 13: Descriptive analysis of 9.what training have you had on oral health care since started working in your ward? in the study population (N=80)

9.What training have you had on oral health care since started working in your ward?	Frequency	Percentages
Oral hygiene	44	55.00%
health education	35	43.75%
Cleaning & root canal	1	1.25%

Table 14: Descriptive analysis of 10. would you like further training on oral health care? in the study population (N=80)

10. Would you like further training on oral health care?	Frequency	Percentages
Yes	66	82.50%
No	14	17.50%

DISCUSSION

Oral cancer is one of the most common cancers in the developing countries⁷. Early diagnosis is the key to a good prognosis and early detection is relatively easy if the health care professional is aware of the disease and its presentation. Nursing staff are the integral part of the health care system they play an important role in patient education, diagnosis and outcome of the treatment. Hence it becomes very important for the nursing staff to be well aware in identifying cancer in its early presentation which can be a premalignant lesion or a ulcero proliferative growth. As they are the primary caregiver to admitted patients, they play a key role in educating the patient on risk factors and are approach for help at the earliest. This makes it crucial to train the nursing staff in these aspects. This study, was conducted to know level of knowledge of nursing staffs in this concept.

In our study we see that 67.50% of the nurses carried out oral health checkups during admissions. In studies conducted by Skivakumar et al⁸ and Carter et al⁵ only 30% and 49% respectively carried out Oral

examination in patients admitted in hospitals. In our study, we see that 58.75% of the nurses were aware of risk factors whereas in a study conducted by Siriphant et al⁹ to determine nurses’ knowledge on oral cancer risk factors, diagnostic procedures, and related opinions, only 50% had had awareness. Most nurse practitioners identified the use of tobacco, alcohol, and prior oral cancer lesions as real risk factors. However, only 35% identified exposure to the sun as a risk for lip cancer. Respondents were not knowledgeable about the early signs of oral cancer, the most common forms, or sites for oral cancer. Only 19% believed that they had current knowledge on oral cancer. Nurse practitioners who reported having a continuing education course on oral cancer within the past 2 to 5 years were 3.1 times more likely to have a high score on knowledge of risk factors and 2.9 times more likely to have a high score on knowledge of both risk factors and of diagnostic procedures than were those who had never had a continuing education course. The reported knowledge of oral cancer, in conjunction with opinions about the level of knowledge and training, pointed out the requirement for systematic educational updates in oral cancer prevention and early detection.

In a study by Shashi Keshwar et al¹⁰, it was seen that nursing students’ awareness of risk factors and the importance of screening for oral cancer is suboptimal. It highlights a need for basic education on oral cancer to make them more aware and further competent towards oral cancer screening and referral.

Meng et al.² modified a questionnaire to assess the oral cancer knowledge, attitudes, and practices of 448 nurse practitioners in Florida. To increase oral cancer survival rates, they discovered that a multidisciplinary strategy encompassing all pertinent medical practitioners would be more successful than depending solely on dentists. This is significant because survivors may experience social isolation, dysphagia, speech difficulties, and facial deformities. Patients with isolated lesions had an 81.3% of 5-year survival rate, while those with lymph node involvement have a 26.4% 5-year survival rate.

The current study is in accordance with the study of Sivakumar et al⁸ who also showed that 50% of the nursing staff were aware of the risk factor and 87.5% wanted more training for oral health care. Sivakumar et al Study have shown that A large number of studies have shown that effective oral cancer screening programs could significantly reduce the incidence of oral cancer in developed countries. The present study indicates that nursing staff are aware of oral care and risk factors for oral cancer how ever more training and continued education can empower them with knowledge on identifying precancers lessons and initial cancerous lesions which results in a good prognosis.

CONCLUSION

Oral cancer is the most common cancer in developing countries.Reducing the incidence of oral cancer in the population by bringing about awareness of the disease and early diagnosis is the key to better prognosis of the disease. As nursing staff is health care persons working in close coordination with the patients it becomes mandatory to empower them with appropriate knowledge of risk factors and identify early lessons. This study shows that further training is needed for oral care.

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