

## Oral Cancer Awareness and Screening Perception among Dental Patients in Karachi, Pakistan

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### Abstract

**Introduction:** Oral and Oro-pharyngeal cancers are jointly defined by site and include cancers of lip, buccal mucosa, alveolar ridge and gingiva, tongue, floor of mouth and/or unspecified parts of the mouth, tonsil, and soft palate and oropharynx. The delay in diagnosis can significantly reduce the diagnostic delays of oral cancer. Awareness and screening of oral cancer can possibly lead to detection of early clinical presentation and hence early diagnosis. The objective was to measure the awareness in the population on oral cancer and their perception to oral cancer screening.

**Methods:** A cross sectional survey of 200 adults who presented to the dental OPD of Ziauddin University was conducted in Karachi, Pakistan. The questionnaire collected data pertaining to patient's demographics, knowledge of oral cancer, experience of screening attitudes, risk factor particularly smoking and other forms of tobacco.

**Results:** 25% had never heard of oral cancer, 35% knew little about it and 12% knew nothing at all. Overall attitude to screening was positive, 92% would like their dentist to tell them if they were being screened for signs of oral cancer and 98% would like help from their dentists for risk factor reduction.

**Conclusion:** There is lack of awareness about oral cancer among the group studied. Recruitment of patients to smoking cessation can be made efficacious by carrying out oral screening targeting the high risk groups and the oral cancer awareness can be influenced by a mass media approach. The key element in the fight against oral cancer is cessation of tobacco use.

**Keywords:** Oral Cancer; Screening; Awareness; Health Education; Risk Factors; Early Diagnosis

### Abbreviations

OC: Oral Cancer; WHO: World Health Organization; ISD: International Statistical Classification of Disease; OSCC: Oral Squamous Cell Carcinoma

### Introduction

Oral cancer is a growing health issue in several region of the world being sixth in line of the most common cancers globally. About three hundred thousand cases of oral cavity and lip cancers had occurred worldwide in 2012; most of these cases had occurred in developing countries [1,2]. Oral and Oro-pharyngeal cancers (OC) using the World Health Organization (WHO) International Statistical Classification

of Disease (ICD) definitions are collectively defined by site and include cancers of lip, buccal mucosa, alveolar ridge and gingiva, tongue, floor of mouth and/or unspecified parts of the mouth, tonsil, and soft palate and oropharynx [3,4].

The occurrence of oral cancer is on the rise. In the recent years the surgical and non-surgical management of oral cancer has become advanced but increased rates of morbidity and mortality remains to be associated with it. These cancers have estimated to be as 529,500 global annual incidences [3,4]. Lesions with a malignant potential can be detected in the oral cavity, which is easily accessible for self and clinical examination in turn making the early detection and diagnosis of the oral cavity attainable that will also cause a significant reduction in the diagnostic delay [5,6].

Majority of oral cancer still presents at an advanced stage when cure rates are abysmal. Ignorance about the danger signs or lack of health seeking behavior in case of premalignant lesions is perhaps responsible for this situation. The time taken by a patient with oral cancer to seek medical advice is the longest delay, and it is followed by the delay on the part medical professionals to refer patients to specialized units for confirmation. The late diagnosis also leads to the high economic burden [5,7].

As a method of disease control, screening of the population and prevention at a primary level using health education has been advised. While the proof for the efficacy of screening programs for oral cancer is ambiguous, one suggestion put forward was that screening in an opportunistic manner in dental practice could be a realistic substitute to screening in a population. Prevention at a primary level can be one method of promoting smoking cessation and reduction of alcohol consumption as supported by various authors [5,8].

Oral cancer screening done by assessing visually and through palpation continues to be debatable as there is no proof of the efficacy of such assessment in reducing the mortality rates from oral cancer, but while performing their routine oral examination the dentists are suggested to remain alert for signs of potentially malignant disorders and oral cancer. Early clinical presentation and early diagnosis can be achieved by the reinforcement of awareness on oral cancer; additionally decreasing the risk factors and early detection of signs and symptoms can also make oral cancer reduction achievable [6,9].

### Objective of the Study

The objective was to measure the awareness in the population on oral cancer and their perception to oral cancer screening.

### Materials and Methods

This hospital based cross sectional study was done to assess the awareness and knowledge of oral cancer in a population attending the Dental OPD of Ziauddin College of dentistry in Karachi. Face to face interviews of 200 patients of the age of 20 years and above was carried out by a trained dentist, between the period of November 2017 to July 2018. Inclusion criteria involved the following; (i) patients who could speak Urdu/English language, (ii) both genders were included in the survey, (iii) patients who consented to be interviewed for research purpose. Both male and female were included in the survey. There were 161 Male and 39 Female. The patients came from different strata of society ranging from slums to posh area. A total of 200 patients were interviewed. A Single interviewer interviewed all the study participants. The questionnaire had 12 close ended questions that were simple, short, and easy to understand. Patients visiting different dental departments during the study period were interviewed.

The responses from the questionnaires and descriptive statistics of demographic variables were reported by means of counts and percentages and graphically presented as figures and tables. SPSS software (version 20) was used to analyze responses.

### Results

200 patients were randomly selected for the survey, out which 161 were male and 39 were female. The mean age was  $45 \pm 9.82$ . The Response rate was 100%. All the 12 questions were answered by each of the participant. On being asked if they smoke 43% ( $n = 86$ ) answered in affirmative whereas 56% ( $n = 112$ ) did not smoke. Upon further questioning if they previously smoked, 44 percent ( $n = 88$ ) answered yes and 56 percent answered no.

The respondents were inquired whether they had heard about oral cancer 70.5% (n = 141) answered in affirmative and 25.5% (n = 51) responded that they have not heard about it. When asked how much they knew about oral cancer, only a small amount of people, 12% (n = 24) had ample knowledge about it, 35% (n = 70) reported that they knew a few things about it whereas 12% (n = 24) had no knowledge of it whereas 7 percent answered that they had never heard about it.

When asked if they were aware that the dentists were trained to check for signs of oral cancer 38.5% (n = 77) answered Yes they were aware 58.5% (n = 117) answered no 2% (n = 4) Answered Do not know/were Not sure that dentists are trained to check for signs of oral cancer. 2% answered they did not know or were not sure about it. When asked if they were aware of regular screening by a dentist 30% (n = 60) Answered Yes they were. 68% (n = 136) Answered No they are not. 2% (n = 4) Answered they did not know/were not sure about it.

Of these 20% (n = 40) had been previously screened by a dentist. Whereas 55.5% (n = 111) they had never been screened and 24.5% (n = 49) said that they did not know/were not sure if they had been screened at all. 32.5% (n = 65) of the respondents had had their recent screening done that day, 9% (n = 18) Answered Within the past year. 9% (n = 18) of the patients had been screened 1 - 2 years ago. 3% (n = 6) Answered 2 - 3 years ago was their most recent screening 2.5% (n = 5) were screened three years ago. The rest had never been screened.

36% (n = 72) of respondents were aware of an extra oral examination 61.5% (n = 123) were not aware of an extra oral examination whereas 2.5% (n = 5) did not know/were Not sure about an extra oral examination.

## Discussion

The burden of oral squamous Cell Carcinoma (OSCC) is on the rise not only in Pakistan but also in the rest of Asian subcontinent. The International Agency for research on cancers is expecting an Epidemic of Oral cancer by 2030, if this rise in incidence goes unabated. This can be largely attributed to the culturally used risk factors, like pan and tobacco [10].

Around half of the patients are diagnosed with lesions that have advanced due to diagnostic delay being common so it becomes important to devise ways and means to assist oral cancer detection at a primary stage. A visible change in the oral mucosa precedes all oral cancer and so a thorough oral cancer examination and risk habit evaluation are one those methods that can lead to early oral cancer detection [11,12]. Extensive treatments and low survival rates are a result of patients being diagnosed at late stages and also lack of knowledge among the public has been considered to be a significant barrier in the early detection of oral cancer [13,14].

This study was designed and carried out to investigate and document the understanding of Oral cancer among the dental patients and their perception to screening for oral cancer. To detect oral cancer at an early stage it is highly imperative that the opportunity provided by a dental appointment be used to increase awareness among the patients. Many of those recruited (25.5%) had never heard of oral cancer. 12% of the patients knew a lot about oral cancer and an equal (12%) knew nothing at all about it. About 50% participants were mindful of the existence of oral cancer which is one of the least heard among other cancers [15]. In the study by Awojobi, *et al.* 73% had heard of oral cancer and 20% had never heard about it all [16].

Out of the 200 participants when asked about their knowledge regarding oral cancer, 12% answered they knew a lot, 34% had some information related to it, 12% knew nothing at all, and 7% had not even heard about it as compared to the study conducted by Awojobi in which only 3% knew a lot, 16% had some information, 41% knew nothing at all and 4% had never even heard about it. Our study showed that oral cancer knowledge was more in the well-educated participants (p value = 0.001) as well as participants with high socio economic status knew more about oral cancer as compared to the ones who belonged to a low socio economic background (p value of 0.02) [16,17].

The smoking rates in this study 43% are more than that for Awojobi which is 23.9%, but less than the study conducted by (patient awareness of oral cancer health advice in an access centre: mixed method study) which was 50% [16]. Another study conducted by Osa-zuwa, *et al.* showed a smoking rate of 26.7% [18,19]. In our study when the number of smokers who had knowledge about oral cancer was evaluated, the results were highly significant (p value = 0.001).

In order to meet the needs of those with low educational levels, specifically those with high school education or less, more interventions should be designed, Furthermore a need to measure actual oral cancer awareness gains as a result of health education in this population is seen; as well as whether screening and educational efforts influence tobacco and other high risk behaviors is to be determined.

Educational leaflets and other strategies designed particularly for this population can account for an increase in knowledge of oral cancer, and future studies could be carried out to explore how effective these will prove to be. Tobacco and oral cancer association is known to people more than alcohol intake and other risk factors [20]. Patient information leaflets can prove to be effective in younger patients with habits putting an adverse effect on their lifestyle, likely of developing oral cancer later in their life. To them advice on risk factors can be given which will also increase their knowledge and awareness of risks related to oral cancer as demonstrated by other studies [5].

It is well recognized and may prove to be effective cost wise, if a dental professional in their general practice recognize oral cancer in its early stage via opportunistic oral mucosal screening. When given advice about cessation of smoking by their dentists, the patients felt positive. The high risk individuals are least likely to visit the general dentist with regularity. Those patients who are most likely of developing oral cancer are among the few to visit a general dentist with regularity. A deeper understanding of why people behave as they do would influence their intake of tobacco and alcohol. Instead of only helping people make better choices as individuals it would be more beneficial if the deep rooted addictive social habits are changed. To promote health behavior changes, social marketing which involves developing understanding and full depth knowledge of the behavior and beliefs of the target population has revealed to be effective [5]. This study did not evaluate whether the dentists are carrying out comprehensive oral cancer screening with high risk individuals nor assessed the patient's general health literacy, which would be helpful in evaluating the problems more effectively.

### Conclusion

Lack of awareness was found about oral cancer among the group studied. Oral cancer awareness can be influenced by a mass media approach. The key element in the fight against oral cancer is cessation of tobacco use.

### Conflict of Interest

The authors do not have any financial interest or any conflict of interest.

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