

Exploring The Self-Awareness Of Dental Students And House Surgeons Regarding Oral Cancer: A Qualitative Study On Control And Prevention Strategies

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Abstract

Objective: This qualitative study is carried out to get insights regarding various factors contributing to the high prevalence of this cancer and preventive strategies by dental students and house officers.

Method: This qualitative research was conducted from June 2023 to Dec 2023, at Watim dental college Rawalpindi. Factors perceived to be related to oral cancer were investigated using the focus group discussion (FGD) method. A total of 20 participants (10 final-year students and 10 house surgeons) voluntarily participating in the study were included. Data were transcribed verbatim and thematic analysis was done.

Results: All participants concurred on the severity of oral cancer as a major public health issue in Pakistan and many of them considered tobacco as a major risk factor. Risk factors, control and preventive strategies were summed up under major themes identified as alarming health issues, lifestyle and culture-related risk factors, issues in the dental curriculum and challenges in clinical set-up hampering thorough examination of oral cancer and related risk factors education.

Conclusion: This present study suggests that formal dental education and clinical training are insufficient to cater for this major oral health issue and its associated risk factors. Rigorous measures should be taken to strengthen our existing undergraduate dental curriculum and incorporate courses at the undergraduate level for better understanding and training in this particular field to help them grapple with this rapidly rising health concern.

Keywords: curriculum, students, oral cancers, risk factors

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1. Introduction

Worldwide, Head and neck cancer is the seventh most prevalent cancer and the third most common type of cancer in South-Central Asia.^{1,2} A variety of factors contribute to the aetiology of lip and oral cancers including alcohol and tobacco use, long-term inflammation, ultraviolet (UV) radiation (in the case of lip cancer), infections with human papillomavirus (HPV), immunosuppression, genetic susceptibility, poor oral hygiene and diet.^{2,3} Associated etiological and risk factors for oral cancer differ depending on the geographical region. For example, in the West, the most prevalent etiological factors are drinking and smoking, whereas in South Asian countries, smokeless tobacco, pan, areca nut, and betel quid are more likely to be linked to the disease.⁴ Oral squamous cell carcinoma is more common in males than in females and the mortality rate is also high in males worldwide.⁵ The incidence rate is much higher in Pakistan and accounts for the commonest cancer in

males due to an alarming rise in tobacco smoking over the previous few decades.⁶

One critical issue concerning oral cancer revolves around the delayed diagnosis of cases, which is one of the major reasons related to the high mortality of oral cancers. This unnecessary delay in diagnosing oral cancer not only postpones treatment but also diminishes patients' survival rates.⁷ Various factors contribute to this delay, including healthcare providers' behaviour and patients' actions, impacting treatment delivery. The association between performing a comprehensive oral cancer examination and healthcare providers' knowledge is evident. The dental surgeon sometimes fails to perform a thorough full oral cancer examination and primarily focuses on existing dental problems only. A delay in seeking early dental care along with the wrong interpretation of the symptoms delays early diagnosis of oral cancer.^{7,8}

Prevention of oral cancer risk factors can massively reduce the incidence of oral cancers worldwide. The literature points out the role of early detection and

preventive strategies. The role Dental surgeons play in minimizing the burden of oral cancer by increasing their patients' awareness regarding various risk factors and educating them properly cannot be underestimated. In addition to that, a thorough full oral cavity clinical examination is important for early detection of oral cancer.⁷ Timely diagnosis of oral cancer will lead to improved treatment outcomes also. Therefore, dental surgeons play a vital role in educating high-risk patients and performing complete oral examinations for diagnosing oral cancer in its early stage.⁹

The objective of this qualitative study is to get insights into the factors that are considered to impact the high prevalence of oral cancer and preventive strategies by dental students and house surgeons. This bottom-up approach will help devise ways to minimize the mortality and morbidity associated with this fatal disease.

2. Materials & Methods

This basic qualitative research was conducted from June 2023 to Dec 2023, at Watim dental college Rawalpindi. Factors perceived to be related to oral cancer were investigated using the focus group discussion (FGD) method and reported by the criteria for reporting qualitative research (COREQ). A total of 20 participants (10 final-year students and 10 house surgeons) voluntarily participating in the study were included. Ethical approval was taken from the college ethical review board. A purposive sampling technique was used with a maximum variation technique. Informed consent was obtained from all participants and were ensured about the confidentiality of responses. A comprehensive semi-structured FGD guide was developed taking into consideration the systematic approach using AMEE Guide No. 87.¹⁰ The interview guide was validated by a medical educationist, oral pathologist and oral and maxillofacial surgeon and piloted to check for adequate item variance, validity, and reliability. Two focus group discussions (n=5 in each group) comprised of final-year BDS students and the other two focus group discussions (n=5 in each group) comprised of house surgeons. All FGDs were facilitated by the main facilitator, who was the principal investigator and two co-facilitators. All focused group discussions were audiotaped and the transcripts were reviewed and coded. Text analysis was done (word repetitions, key-indigenous terms, and

keywords in contexts) using an open coding technique. Data collection and analysis were done at the same time.

3. Results

The mean age of the participants was 24 years. The FGD on average lasted for 1 hour and 30 minutes. There were more females in each group 3:1. The following themes emerged which represented participants' ideas, thoughts and perceptions about oral cancer.

Almost all study participants strongly agreed that cancer of the oral cavity is one of the serious health problems in Pakistan and globally. "It is a very critical issue in Pakistan, because the smoking rate is high in Pakistan and is seen in both young and old patients." The participants were of the view that oral cancer is on the rise in our part of the world. "Oral cancer is on the rise, during our clinical rotations we have seen many patients with suspicious lesions and full-fledged squamous cell carcinoma in our hospital". Participants rightly mentioned several factors that can cause a delay in detecting oral cancer. "Most of the cancer patients in Pakistan report at a late stage making the treatment fairly difficult and leading to a high mortality rate in Pakistan probably due to lack of awareness and financial issues." Many participants believed that tobacco and other forms of substance abuse are the main risk factors for causing cancer of the oral cavity. "In addition to smoking, usage of other forms of tobacco like moist snuff, answer, pan, gutka, hukka and now vaping is fairly common as the public is not aware of the devastating side-effects of these habits". The participants pointed out the habits, lifestyle and cultural effects playing a role in increasing the risk for oral cancers. "Our Lifestyle & culture leads to the increasing incidence of Oral cancers in Pakistan such as the modern culture of vaping in our cities and culture of hukka in our village our youth often adopt this habit of smoking to overcome stress issues"

The majority of the participants agreed upon the importance of formal dental education and rigorous clinical training for their optimal dental care practices. They pointed out some deficiencies in their dental curriculum regarding oral cancer screening and management. "Although we did study oral cancer I feel the theoretical and practical parts need some improvement like more interactive sessions, case-based learning and early clinical exposure to cancer clinics." The participants were of the view that formal education about oral cancer and the associated risk factors should be reinforced by early clinical exposure in specialized hospitals and cancer hospitals where dental students can easily observe and actively participate in the

examination, diagnosis and treatment planning of oral cancer patients “..as new dental graduates we lack enough expertise for oral cancer screening, we feel a sense of fear of misdiagnosing when approaching such patients”

Various kinds of challenges were addressed by the participants that can negatively influence their clinical practice when examining oral cancer patients and patients’ education of the associated risk factors. “Due to economic limitations and fewer resources hospitals are overburdened and doctor-patient communication and relationship is also unsatisfactory in our hospitals. inadequately trained dental surgeons can miss out on a suspicious lesion requiring further workup”. Additional hindrances were due to the conservative culture of masses hampering oral cancer examination. For example, “asking a female about smoking and other associated risk factors are considered a taboo and asking such questions makes the patient uncomfortable...mostly female patients are not comfortable being examined by a male dental surgeon” “Lack of education and visiting the soothsayers for treatments and myths like cancer means death is very deep-rooted in our society complicating the discussion of risk factors of cancer with the patients”

4. Discussion

Basic dental education and effective clinical training are pertinent for complete oral cavity cancer examination and determination of related risk factors. A dental surgeon's adequate knowledge, skill and empathetic behaviour propels him to achieve the highest level of competency in his/her dental practice. Similar to a study conducted in Jazan, the present study highlights the dearth of required expertise by our new dental graduates and the significance of a dental surgeon's sound knowledge of the subject for performing a thorough examination of oral cancer patients and education regarding related risk factors. Hence this may lead to a lack of essential expertise for efficient oral cancer practice.^{7,10} A Dental surgeon's skill in managing oral cancer patients is of utmost importance. This study showed that the ineffective task of performing a complete clinical examination of the head and neck region and inadequate patient education can badly affect the outcomes of this fatal disease. This was done by a similar study conducted in Nepal.¹¹

In a somewhat similar study, the current study also showed, that financial constraints and poor socioeconomic conditions hamper early hospital visits

and screening for oral cancers.^{12,16} Allocation of enough funds for health by the Government and massive public awareness campaign by public and private dental hospitals, launching of outreach programs to spread awareness regarding this global health problem be made a priority to avoid morbidity and mortality associated with this fatal disease.

The study showed that oral cancer is taught at the undergraduate level and students are sensitized to the topic of oral cancer. However, due to the alarming rise of oral cancer, dental surgeons don't find themselves fully equipped to grapple with this huge public health issue. The majority of the participants mentioned that they wanted to be educated more about oral cancer and the most preferred method was seminars, in addition to that more focus should be on case-based learning and problem-based learning (PBL). These methods of teaching help students enhance their knowledge, help them identify the glitches and develop efficient strategies for solving them. The same finding was seen in similar studies conducted in other South Asian countries.^{7,11,12,13} Therefore such teaching strategies can be easily incorporated in subjects like oral medicine, oral pathology, and oral and maxillofacial surgery. The students will understand the subject well and refine their knowledge of oral cancer every year of their training. The undergraduate dental curriculum needs to be modified taking into account regional and national issues. The dental curriculum should be at par with international standards. Hence including oral cancer as a separate course during final year BDS with adequate clinical exposure in more specialized hospitals will help overcome this problem.

When there is a lack of related necessary expertise in performing oral cancer examination and patient education of its risk factors, this ultimately contributes to not rightly practising the standard protocols. This was seen in the present study where a level of hesitation was seen to carry out the complete examination of oral cancer patients for the fear of misdiagnosing by the new graduates. This issue was pointed out in similar studies.^{11,13} This problem can be easily overcome by involving the final year students and house surgeons in routine case presentations and discussions at the dental hospital, they should also be encouraged to regularly attend continuing professional development (CPD) programs and attend various conferences on oral cancers. Moreover, cultural factors such as the reluctance of female patients for oral cancer

examinations performed by the opposite gender and taking a detailed history were at times hampered due to such cultural constraints. This was by other studies.^{14,16,17}

Limitations:

The present study has few limitations, the number of participants was limited to a single dental college and hospital, which can restrict the generalizability of the findings. Further in-depth studies should be carried out to look for the possible effects of dental college curriculum and clinical training requirements country-wide to help policymakers make necessary amendments to the current dental curriculum.

5. Conclusion

Oral cancer is a global issue and a rapidly rising dental health problem. The findings of the study show that formal dental education and clinical training are not enough to cater for this major oral health issue and its associated risk factors. Rigorous measures should be taken to strengthen the present undergraduate dental curriculum to tackle this deadly disease efficiently. Formulating an integrated teaching module that involves various departments such as oral pathology, oral medicine, oral radiology and oral and maxillofacial surgery for a better understanding of oral cancers. Taking into account the valid concerns of the participants will help the policymakers make necessary changes in the current dental curriculum and incorporate courses at the undergraduate level for better understanding and training in this particular field to help them grapple with this rapidly rising health concern.

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G.S.O - Conception of study

- Experimentation/Study Conduction

G.S.O, M.A, J.S.A, R.I -

Analysis/Interpretation/Discussion

G.S.O, M.F - Manuscript Writing

M.A, S.M.G - Critical Review

- Facilitation and Material analysis

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References

1. Sarode G, Maniyar N, Sarode S C, Jafer M, Patil S, Awan K H. Epidemiologic aspects of oral cancer. *Disease-a-Month*, 66(12), 100988. doi: 10.1016/j.disamonth.2020.100988. Epub 2020 Jun 27. PMID: 32605720.
2. Malkani N, Kazmi S, Rashid MU. Epidemiological assessment of oral cancer burden in Pakistan. *Cancer Investigation*. 2021; 39(10): 842-853. doi: 10.1080/07357907.2021.1982962. Epub 2021 Oct 13. PMID: 34533089.
3. Saira,Ahmed R, Malik S, Khan MF, Khattak MR. Epidemiological and clinical correlates of oral squamous cell carcinoma in patients from north-west Pakistan. *J Pak Med Assoc*. 2019 Aug;69(8):1074-1078. PMID: 31431755.
4. Bugshan A, Farooq, I. Oral squamous cell carcinoma: metastasis, potentially associated malignant disorders, aetiology and recent advancements in diagnosis.2020doi: 10.12688/f1000research.22941.1. PMID: 32399208; PMCID: PMC7194458.
5. García-Martín JM, Varela-Centelles P, González M, Seoane-Romero J. M, Seoane J, García-Pola MJ. Epidemiology of oral cancer. Oral cancer detection: novel strategies and clinical impact.2019: 81-93. https://doi.org/10.1007/978-3-319-61255-3_3
6. Badar F, Mahmood S. Hospital-based cancer profile at the Shaikat Khanum Memorial Cancer Hospital and research centre, Lahore, Pakistan. *J Coll Physicians Surg Pak*.2015; 25(4), 259-263.
7. Jafer M, Crutzen R, Moafa I, van den Borne B. What do dentists and dental students think of Oral Cancer and its control and prevention strategies? A qualitative study in Jazan dental school. *Journal of Cancer Education*. 2021;36 134-142. doi: 10.1007/s13187-019-01609-z. PMID: 31506768; PMCID: PMC7835163.
8. Seoane J, Alvarez-Novoa P, Gomez I, Takkouche B, Diz P, Warnakulasiruya S et al .Early oral cancer diagnosis: the Aarhus statement perspective. A systematic review and meta-analysis. *Head Neck*.2016; 38(Suppl 1):2182–2189. doi:10.1002/hed.24050
9. Singh S, Singh J, Chandra S, Samadi F M.. Prevalence of oral cancer and oral epithelial dysplasia among North Indian population: A retrospective institutional study. *Journal of Oral and Maxillofacial Pathology: JOMFP*. 2020; 24(1): 87. doi: 10.4103/jomfp.JOMFP_347_19
10. Artino JR, La RJ, Dezee KJ, Gehlbach H. Developing questionnaires for educational research: AMEE Guide No. 87. *Medical teacher*. 2014;36(6):463-74. <https://doi.org/10.3109/0142159x.2014.889814>
11. Poudel P, Srii R, Marla V. Oral cancer awareness among undergraduate dental students and dental surgeons: A descriptive cross-sectional study. *JNMA: Journal of the Nepal Medical Association*.2020;58(222):102.doi: 10.31729/jnma.4847.
12. Ariyawardana A, Ekanayake L. Screening for oral cancer/pre-cancer: knowledge and opinions of dentists employed in the

- public sector dental services of Sri Lanka. *Asian Pacific Journal of Cancer Prevention*. 2008; 9(4): 615-618.
13. Pokharel M, Shrestha I, Dhakal A, Amatya RC. Awareness and knowledge of oral cancer among medical students in Kathmandu University School of Medical Sciences. *Kathmandu Univ Med J*. 2017; 15: 75-7.
 14. Keser G, Pekiner F. N. Assessing oral cancer awareness among dental students. *Journal of Cancer Education*. 2019; 34(3):512-518. doi: 10.1007/s13187-018-1332-x.
 15. Almutairi, K. M. Cultural and language differences as a barrier to provision of quality care by the health workforce in Saudi Arabia. *Saudi medical journal*. 2015; 36(4):425. doi: 10.15537/smj.2015.4.10133.
 16. Haresaku S, Makino M, Sugiyama S, Naito T, Mariño RJ. Comparison of practices, knowledge, confidence, and attitude toward oral cancer among oral health professionals between Japan and Australia. *Journal of Cancer Education*. 2018; 33: 429-435. DOI: 10.1007/s13187-016-1086-2
 17. Khokhar MA, Niaz MO, Aslam A, Khan HA, Loya A, Speight, P. M, et al. Pakistan Oral Cancer Collaborative: analyzing barriers and obstacles to oral cancer diagnosis, treatment, and prevention in Pakistan. *Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology*. 2021; 132(3): 312-319. <https://doi.org/10.1016/j.oooo.2021.04.058>