

ORIGINAL ARTICLE

ASSESSING DISPARITIES IN ORAL CANCER AWARENESS: A COMPARISON BETWEEN TOBACCO USERS AND NON-TOBACCO USERS FROM A PRIVATE DENTAL COLLEGE, KARACHI

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ABSTRACT

Objective: Study aims to assess the awareness about oral cancer among patients visiting private dental college, Karachi.

Method: This cross-sectional study was conducted in the outpatient department of a private dental college and hospital in Karachi. A predesigned questionnaire was used to find out the information from the study participants. Patients aged 18 years and above were included. Descriptive statistics and chi-square tests were used for data analysis.

Results: Total of 384 participants were recruited. Of these, 51 (13.3%) were females and the mean age of the total sample was 35.19 years (SD $\pm$ 13.942) [R: 18-75 years]. Eighty-one percent of the participants heard about oral cancer. Among those who were aware, 201 (52.3%) mentioned social media as the main source of information, while only 34 (8.90%) mentioned dentists as a source. There were 253 (65.9%) participants who had a practice of using tobacco either in the form of smoking, Gutkha or pan.

Conclusion: These results underscore the need for targeted oral cancer awareness campaigns, especially focusing on unemployed individuals and promoting diverse sources of information dissemination.

KEYWORDS: Gutkha, Oral cancer, risk factors of oral cancer

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INTRODUCTION

Cancer that occurs in the lips, floor of the mouth, cheeks, tongue, gums and palate is commonly termed oral cancer [1]. Globally oral cancer is the 6th most common cancer among all cancers [2]. Every year, there are over 400,000 newly diagnosed cases of oral cancer worldwide, with a majority of these occurrences being documented in Asian nations [3]. In Southern Asia, oral cancer is prevalent and imposes a significant burden due to the habitual use of betel quid, cigarette smoking, and the consumption of chewing tobacco [4].

Tobacco is the most common risk factor for oral

cancer and has a synergistic effect with alcohol, increasing the risk of oral cancer 300-fold among individuals who smoke tobacco and consume alcohol [5,6]. Other risk factors include areca nut [7], betel quid, human papillomavirus and low intake of fruits and vegetables [8]. The incidence and mortality rates of oral cancer are directly proportional to age, with higher rates observed among the lower socioeconomic group [9,10].

Early-stage diagnosis and individual self-analysis of the oral cavity can lead to more successful treatment and improved survival rates for patients [11,12].

Awareness of oral cancer among the population plays a crucial role in disease prevention [13]. Inadequate awareness of oral cancer among the general population is an important factor in the detection and treatment of oral cancer [14]. Insufficient knowledge of oral cancer has been observed in Brazil and India [15,16]. In a study conducted in Pakistan, 54% of participants were aware of oral cancer, but only 95% of them had information about the risk [17]. Poor knowledge has also been observed among adults in some studies of Pakistan [18,19]. A better understanding of the oral cancer awareness landscape among tobacco users and non-tobacco users can inform public health campaigns, educational programs, and policy interventions aimed at reducing the incidence of oral cancer in Karachi, Pakistan.

This study aims to evaluate and compare oral cancer awareness disparities between individuals who use tobacco and those who do not use tobacco, focusing on the context of Karachi, Pakistan.

METHODOLOGY

A cross-sectional investigation was carried out at the outpatient department of a private dental college and hospital located in Karachi, spanning the duration of six months from July to December 2022. The dental research ethics committee approved the study. Patients visiting for dental treatment were recruited using convenience sampling. To determine the

required sample size for estimating the frequency of the population, we employed the formula commonly used in, expected frequency of 50% with confidence level of 95% with a 5% margin of error [20]. The study encompassed 384 participants who were aged 18 years and above, encompassing both males and females. Patients who declined participation were not considered for inclusion. The participants were categorized into two groups: one consisted of individuals who regularly consumed tobacco in any form, and the other comprised those who did not use tobacco. The participants were categorized into two distinct strata based on their tobacco usage. However, due to practical constraints and the availability of participants, convenience sampling was applied within each stratum to achieve the final sample composition. The research purpose was described, and verbal consent was obtained from the participants before the study. Information from the participants was collected through interviews by using a self-administered structured questionnaire adapted from previous research [15].

The research tool is comprised of two sections. The initial segment encompassed demographic inquiries, specifically seeking information on participants' age, gender, level of education, and current employment status.

The subsequent section encompassed a series of inquiries that explored awareness and knowledge aspects. The questionnaire includes questions like participants' awareness of oral cancer and sources of information, shedding light on knowledge dissemination. The survey also evaluates participants' grasp of oral cancer treatment choices, aiming to gauge their understanding of interventions. These questionnaire elements create a comprehensive framework to explore awareness, information sources, risk factor knowledge, preventive understanding, and treatment familiarity regarding oral cancer. Answers were documented as either "Yes" or "No."

Collected information was entered and analyzed using the Statistical Package for Social Sciences

(SPSS) version 20. Descriptive statistics such as mean, standard deviation, percentage, and frequencies were used to summarize the data. To analyze the association between different variables, a Chi-square test was employed, with a p-value of less than 0.05 considered significant.

RESULTS

The research achieved a 100% response rate with all 384 total samples responding to the research questions. Fifty-one (13.3%) participants were female and 333 (86.7%) were males. The mean age was 35.19 years (35.19 ± 13.942) [R: 18-75 years]. Descriptive results showed that 245 (64%) of the study participants had formal education, with 48% having education of more than 10 years, and 36.2% never attended school. Additionally, 291 (91%)

participants were employed, while 31 (8.1%) were unemployed. Among the participants, 253 (65.9%) reported using tobacco in the form of smoking, Gutkha, or pan (table 1).

Out of the total, 312 (81.3%) participants had heard about oral cancer (figure 1). Among those who were aware, 201 (52.3%) mentioned social media as the main source of information, while only 34 (8.90%) mentioned dentists as a source. Regarding knowledge of the risk factors of oral cancer, 219 (57%) respondents reported having knowledge. Almost half of the respondents knew that oral cancer is preventable, and 232 (60%) believed it is curable. Statistical results are presented in table 2.

Table 1: Demographic Information of Study Participants

N	384
Gender	
Male	333 (86.7)
Female	51(13.3)
Age	35.19 ± 13.942
Age (Range)	18-75 years
Education	
Formal	245 (63.8)
Never attended school	139(36.2)
Level of Education	
Education more than 10 years	185(48.2) %
Below 10 years	199(51.8)
Job Status	
Employed	291 (91.0)
Unemployed	31 (8.1)
Tobacco User	
Yes	253(65.8)
No	131(34.1)

Table 1: Demographic Information of Study Participants

Responses	Tobacco users	Non-tobacco users	Total N (%)	p-value
Heard of oral cancer				
Yes	203 (80.2%)	109 (83.2%)	312 (81.3%)	0.480
No	50 (19.8%)	22 (16.8%)	72 (18.7%)	
Source of information of oral cancer				0.332
Social media	127 (50.2%)	74 (56.2%)	201 (52.3%)	
Newspaper	56 (22.1%)	21 (16%)	77 (20.10%)	
TV	50 (19.8%)	22 (16.8%)	72 (18.70%)	
Dentist	20 (7.9%)	14 (10.7%)	34 (8.90%)	
Knowledge of risk factors of oral cancer				0.664
Yes	142 (56.1%)	77 (58.8%)	219 (57%)	
No	111 (43.9%)	54 (41.2%)	165 (43%)	0.05
Knowledge of prevention of oral cancer				
Yes	118 (46.6%)	82 (62.6%)	200 (52.1%)	
No	135 (53.4%)	49 (37.4%)	184 (47.9%)	0.05
Knowledge of treatment of oral cancer				
Yes	144 (56.9%)	88 (67.2%)	232 (60.4%)	0.05
No	109 (43.1%)	43 (32.8%)	152 (39.6%)	

DISCUSSION

The study was conducted at a private dental teaching hospital in Karachi, Pakistan and it yielded valuable insights into oral cancer awareness. In this study, 81.3% of the participants reported having heard about oral cancer. Similar prevalence rates of approximately 81% were observed in studies conducted in Brazil and India [16,21]. Our findings aligned with research carried out in England where the prevalence rate of awareness about oral cancer was approximately 73% and in the same study the percentage of participants who had not heard of oral cancer was reported as 20%, which closely

corresponds to our study's result of 18.7% [22]. Despite advances in oral cancer research, until now less than 50% of the cases diagnosed at a late stage impact the prognosis of the condition [14]. Increasing oral cancer awareness among the population could lower its incidence as early detection has an 80% success rate [17].

Television, newspapers, and social media were selected by participants as their source of information on oral cancer. These findings were consistent with a previous study conducted in Australia [23]. Only 8% of those interviewed reported that they got

information about oral cancer from a dentist, the results were consistent with research carried out in Sudan and India [24,25]. Research conducted in Turkey, suggested the need for upgrading cancer education on diagnosis and prevention methods for dentist [26].

Healthcare workers, especially dentists, play a pivotal role in oral cancer prevention. Thorough oral examinations to identify signs and symptoms on oral cancer should be considered. The scarcity of appropriate information and proper diagnostic procedures were found to be associated with dental health care workers [27].

Oral cancer is a preventable disease; raising awareness of its risk factors can help people avoid its consumption [28]. In our study, 57% of participants had information of risk factors of oral cancer while another study reported 80% of respondents replied that they knew the risk factors of oral cancer [18]. Regarding information on the prevention and treatment of oral cancer, our findings were 51% and 60.4%, respectively. Our result on oral cancer treatment was consistent with research conducted by Limaye et al, which reported a 66% treatment rate [9]. However, in contrast to previous research, our findings on information oral cancer prevention were lower at 32.9% [18].

Strengths and Limitations

Potential limitations include convenience sampling introducing selection bias, single-center study limiting generalizability, self-reporting bias affecting data accuracy, lack of a control group hindering definitive conclusions, and the limited geographic scope of Karachi, Pakistan.

CONCLUSION

Results showed that most of the participants had heard about the disease and were aware of the risk factors associated with it. Utilizing media, especially social media platforms, plays an important role in raising awareness about the prevention of oral cancer by highlighting the risk factors associated with the disease. Public health sectors' initiatives

in conducting oral health awareness programs through the media would significantly reduce the burden of oral cancer, as well as the resources allocated to the healthcare system.

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Author's Contribution

MAL: Conception and design of the work; analysis and interpretation of data for the work.

SIA: Review and editing the article.

HA: Final approval of the version to be published

AW, HK, HS: Analysis of data.

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