Original Article

Assessment of Knowledge and Awareness about Periodontal Health in Smoker Patients: A Questionnaire Study

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Abstract

Introduction: The impact of smoking on oral health is directly related to smoking. The questionnaire study was carried out to assess the knowledge and awareness of smoker patients about periodontal health and its effect on treatment outcomes. **Materials and Methods:** A cross-sectional study was carried out using self-administered structured questionnaire among 200 smoker patients. There were a total of 20 close-ended questions related to knowledge and awareness pertaining to periodontal health in smoker patients. **Results:** The results showed that about 69% have poor knowledge of awareness of smoking on oral health and about 89% have poor knowledge on awareness of smoking on periodontal health. **Conclusion:** The study concluded that awareness and knowledge level of periodontal health among smoker patient was very low.

Keywords: Awareness, Knowledge, Periodontal health, Smoker patient.

Introduction

Periodontal disease such as gingivitis and periodontitis is one of the most common chronic diseases.[1] It almost affects about 90% of the whole population. It is the most common cause of tooth loss and also contributes to systemic diseases. Smoking is one of the major risk factors for periodontal disease. Smoking also affects the prevalence, severity, progression, and treatment response of the disease.[2] Epidemiological studies have proven higher risk for periodontal disease in smokers as compared to non-smokers. This is directly proportional to the duration and rate of smoking.

Smoking is still an addiction in many populations around the world despite the increasing awareness of its harmful effects on general health. Smokers have shown about 80% of myocardial infarctions, and 70% of chronic lung diseases, cancer and 90% periodontal disease, premature delivery.[3] The oral and dental problems include periodontal diseases, bone loss, mobility of teeth, staining or discoloration of teeth, oral mucosal lesions such as leukoplakia, acute necrotizing ulcerative gingivitis, oral submucous fibrosis and smokers palate, delayed and impaired wound healing, and failure of dental implants to life-threatening diseases such as oral cancer.[4-7]

Although there are established negative effects of smoking on overall health, there are less studies on knowledge and awareness on oral health. Thus, the aim of the present study was conducted to assess the awareness and knowledge about periodontal health in smoker patients so as to motivate the patients to quit the habit and explain about its effect on treatment outcomes.

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Materials and Methods

This is a cross-sectional survey study with a sample consisting of 200 smoker patients from seven private dental clinics in Ahmedabad. A specially formulated self-administered objective type of questionnaire consisting of close-ended questions was distributed among patients. The study was conducted from May 10, 2021, to July 1, 2021.

The questionnaire study consisted of total 15 questions. This was constructed in two languages, that is, English and Gujarati for the convenience of the local patients. The questionnaire was divided in two domains.

1. Sociodemographic variables which included gender, marital status, age, and educational level and

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2. Questions consisting about knowledge and awareness regarding the effects of smoking on general and periodontal health.

Those who were uncooperative or not willing to give consent were excluded from the study. Participation in the survey was voluntary. There is no universally accepted or recommended index to measure oral health knowledge and awareness. Hence, the results were calculated in terms of percentage.

Results

Sociodemography

Out of 200 patients, majority of the participants of this study were male, married, in the age group of 25–50 years. The male percentage was 81.5 and that of female being 18.5. The marital status variable was found out as married being 56% and unmarried 44%. Only 8% was <25 years, with maximum 61% in the age group of 25–50 years, 31% more than 50 years. The literacy rate variable with illiterate was 36%, high school 5%, higher secondary 33%, and graduation 25.5% (Table 1).

Association between smoking status and awareness

Table 2 shows the association between smoking status and awareness of smoking effects on general health, oral health, and gum disease. About 57.5% were aware of smoking affecting general health. About 31% were aware of association of smoking with oral health with poor knowledge with only 11% being aware of smoking affecting gum disease. Chart 1 shows the association between smoking status and awareness of smoking effects on general health, oral health, and gum disease (in percentage).

Table 3, Chart 2, shows knowledge on effect of smoking on oral health. Smokers are more likely to develop gum disease, oral ulcer, tooth discolouration, bad breath, oral cancer. The results shows percentage with low knowledge. Smoking causes gum disease with 11 percentage, oral ulcer 16 percentage, tooth discolouration 28, bad breadth and oral cancer with 31, 6 percentage respectively.

Table 1: Sociodemographic variables of the study patients

Variable	Categories	Number	Percentage
Gender	Male	163	81.5
	Female	37	18.5
Marital status	Married	112	56
	Unmarried	88	44
Age group	<25 years	16	8
	25–50 years	122	61
	>50 years	62	31
Literacy level	Illiterate	73	36.5
	High school	10	5
	Higher secondary	66	33
	Graduation	51	25.5

Table 2: Association between smoking status and awareness of smoking effects on general health, oral health, and gum disease

Study variable	Number	Percentage
Awareness of smoking affecting general health		
Yes	115	57.5
No	85	42.5
Awareness of smoking affecting oral health		
Yes	62	31
No	138	69
Awareness of smoking causing gum diseases		
Yes	22	11
No	178	89

Discussion

Intensive research in the past years has acknowledged the direct negative effect of smoking on oral and overall health. Smoking is a risk factor for periodontal disease.[8]

Smoking is on the rise in the India. The use of tobacco and knowledge and awareness of populations regarding its use

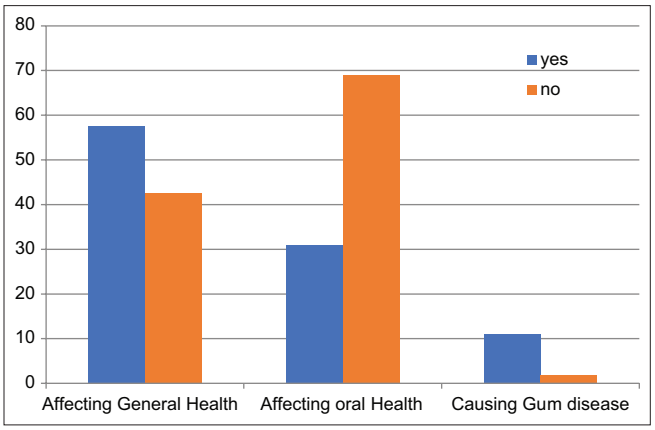

Chart 1: Association between smoking status and awareness of smoking effects on general health, oral health, and gum disease

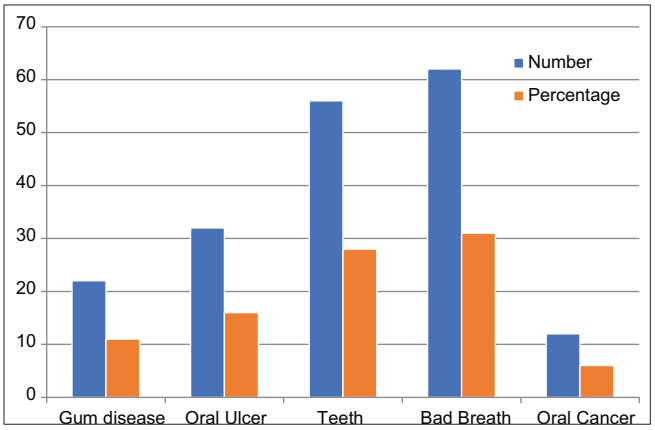

Chart 2: Knowledge on the effect of smoking on oral health

Table 3: Knowledge on the effect of smoking on oral health

Smoking effect	Number	Percentage
Gum disease	22	11
Oral ulcer	32	16
Teeth discoloration	56	28
Bad breath	62	31
Oral cancer	12	6

has been evaluated in the past researches. About 15 billion cigarettes are sold daily or 10 million every minute in the whole world.[9]

National Household Survey of the drug and alcohol abuse in India 2002 has reported the prevalence of tobacco use among 12–18 years old as 55.8%.[10] According to the World Health Organization (WHO), it is estimated that tobacco use will be responsible for 13.3% of all the deaths in India by the year 2020.[11]

In this study, smoking was found higher in illiterate people as well as those who have attained graduation and males 25–50 years. This may be also related to low socioeconomic status as literacy has an impact on economic status. Cigarette smoking is found to be popular among people who have attained graduation. It might be because of the easy affordability of cigarettes by the people with higher education and thus better socioeconomic status.

Poor oral conditions may adversely affect general health, and certain medical conditions may have a negative impact on the oral health and gum health. Periodontal disease progression is usually unnoticed, and most people probably recognize it only when it reaches to an advanced stage. Therefore, knowledge and awareness of periodontal diseases is important to control and maintain periodontal health.

After completing this study, we conclude on the basis of our findings that about 69% have poor knowledge on ill effects of smoking on oral health and 89% showed poor knowledge on awareness of association of smoking on gum diseases. Thus, a lot of awareness programs about the knowledge, awareness, and ill effects of smoking on oral and periodontal health care should take place at regular time intervals at different venues so that the more and more people get educated and feel motivated to quit smoking.

Conclusion

Within the limitations of this study, with a sample size of only 200, the results show that smokers have significantly less awareness about the adverse effects of smoking on oral and periodontal health. With the results of this study, it can be concluded that awareness should be spread about the knowledge, awareness, and ill effects of smoking so that the patients can be motivated to quit smoking. A proper training and education may be the most efficient method in increasing the awareness against smoking among dental patients and the population in general.

However, more studies should be conducted with a larger sample size and also covering more geographical areas for better understanding of the topic.

Dental health professionals, along with medical and other allied professionals, play a key role in educating and informing patients about the risks of tobacco consumption and also supporting smokers in the cessation of the habit.

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