ORIGINAL RESEARCH

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

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Abstract

Aim and objective: The questionnaire study was carried out to assess the knowledge and awareness about periodontal health and its effect on treatment outcomes in smoker patients.

Materials and methods: A total of 15 close-ended questions were self-constructed. A cross-sectional study was carried out among 200 smoker patients. The questions were related to the 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 the awareness and knowledge level of periodontal health among smoker patients was very low.

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

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Introduction

The most common chronic oral diseases are gingivitis and periodontitis.[1] This periodontal disease affects majority of population in India and contributes to almost 90% of it. It is one of the causes of tooth loss and it is directly related to systemic diseases. The most common cause of periodontal disease is smoking; it is one of the major risk factors. Smoking also affects the prevalence and severity of the disease.[2] Moreover, progression of the disease and its treatment outcome is directly related to smoking. Studies and research have suggested that smokers suffer more from periodontal disease than nonsmokers. This is directly linked to the duration and rate of smoking. It is proportional, the more the duration and rate of smoking the more the severity of disease.

Smokers have shown about 80% of myocardial infarctions, 70% of chronic lung diseases and cancer, and 90% of periodontal disease and premature delivery.[3] The common oral problems in smokers are staining or discoloration of teeth, mobility of teeth, periodontal pocket, bone loss, oral mucosal lesions such as leukoplakia, acute necrotizing ulcerative gingivitis, precancerous conditions such as oral submucous fibrosis and smokers palate, delayed and impaired wound healing, dental implant failure and serious conditions as oral cancer.[4–7]

There are many epidemiological studies that have shown smoking has negative effect on overall health but 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 smoking addiction and explain about its effect on treatment outcomes.

Materials and Methods

This is a cross-sectional survey study with a sample consisting of 200 smoker patient from 7 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.

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The questionnaire study consisted of a total of 15 questions. These questions were self-constructed. The questionnaire was formulated in two languages, that is, English and Gujarati, so that it is easy for the local people to understand. The questionnaire was divided into two domains.

- Sociodemographic variables which consist of gender, marital status, age and educational level.
- Questions consisting about knowledge and awareness regarding the effects of smoking on general and periodontal health.

Those patients who were not ready to participate were not included in 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

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 less than 25 years, with maximum 61% in the age group of 25–50 years, 31% more than 50 years. The literacy rate variable with illiterate being 36%, high school 5%, higher secondary 33%, 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. Fifty-seven point five percent were aware of smoking affecting general health. Thirty-one percent were aware of association of smoking with oral health with poor knowledge with only 11% being aware of smoking affecting gum disease. Figure 1 shows the association between smoking status and awareness of smoking effects on general health, oral health, and gum disease (in percentage).

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

Discussion

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

Table 1: Sociodemographic variables of 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

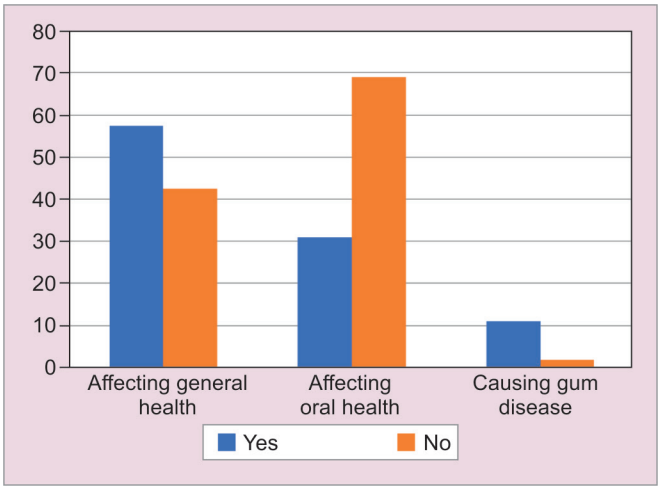

Fig. 1: Association between smoking status and awareness of smoking effects on general health, oral health, and gum disease

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

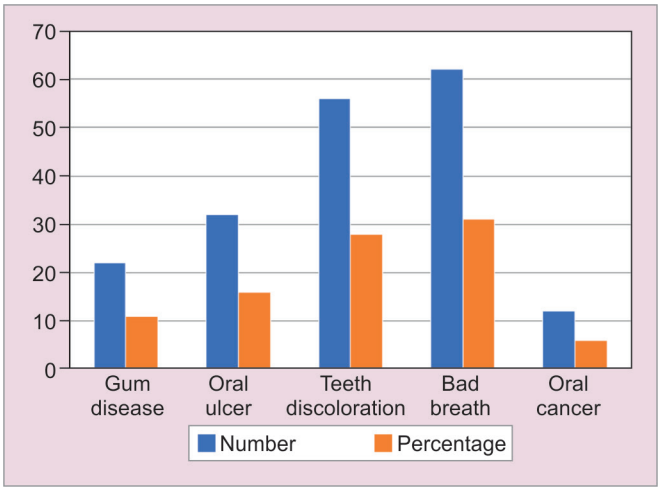

Fig. 2: Knowledge on the effect of smoking on oral health

Smoking is on the rise in India. Past studies have shown the use of tobacco and knowledge and awareness of its usage among smoker patients. Studies have suggested 15 billion cigarettes are sold and consumed daily or we can put it as 10 million every minute in the whole world.[9]

National Household Survey of the drug and alcohol abuse in India 2002 has reported that young people around the age group of 12–18 years old show prevalence of tobacco use as 55.8%.[10] According to the World Health Organization (WHO), they have given statement after undergoing study in India that tobacco use will be responsible for 13.3% of all the deaths in India by the year 2020.[11]

In this study, we found out that illiterate people, graduated, and males in the age group of 25–50 years smoking was found higher. This can be attributed to low socioeconomic status as literacy has an impact on economic status. Cigarette smoking is found more among people who have graduated; the reason behind it could be because of the easy affordability of cigarettes by the people with higher education and thus better socio-economic status.

Poor oral condition is directly linked to poor general health. Periodontal diseases such as bone loss, pocket formation, and mobility of tooth usually go unnoticed and people only get to know about it at later stages when there are severe periodontal health losses. Therefore, knowledge and awareness of periodontal diseases is a very important aspect 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, on a larger scale, a lot needs to be done regarding awareness programs. These programs should focus on the knowledge, awareness, and ill effects of smoking on not only oral but regarding periodontal healthcare. Moreover such educational programs should take place at regular time intervals at different places so that lot of people get benefitted 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 there is lot which needs to be worked out regarding awareness and ill effects of smoking. A proper training and education is the most important aspect not only for smokers but also for people in general so that they are well informed about the consequences and motivate others and their family or friends to not to become an addict and quit smoking. But more studies are still required to be done on a larger scale with a large sample size and also on different locations and areas for better understanding of the topic and getting results.

Dentists and also people with medical fraternity play an important role. They are responsible for educating and informing patients about the adverse effects of smoking consumption and also explain and motivate patients to quit the habit. Dental professionals can counsel and also support smokers in all ways. The US Preventive Services Task Force (USPSTF) recommends using the 5As model, i.e., Ask, Advice, Assess, Assist, and Arrange.

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