

ASSESSMENT OF KNOWLEDGE ABOUT PERIODONTAL DISEASE AMONG A GROUP OF HEALTH CARE PROFESSIONALS IN CHENNAI CITY: A QUESTIONNAIRE STUDY

SUSMITHA E^{1*}, RADHIKA ARJUNKUMAR²

Department of Periodontics, Saveetha Dental College, Velappanchavadi, Chennai - 600 077, Tamil Nadu, India. ²Department of Periodontics, Saveetha Dental College, Velappanchavadi, Chennai - 600 077, Tamil Nadu, India.
 Email: susmithaelango17@gmail.com

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ABSTRACT

Objective: The main objective of this study is to assess the awareness about oral hygiene, etiology periodontal disease and awareness of treatment techniques for the same among medical professionals in Chennai city.

METHODS: A survey will be carried out among a group of medical professionals comprising of interns, post graduates (PG) and faculty in medical colleges by means of questions to identify the knowledge of periodontitis, risk associated with periodontal disease and the general awareness among medical professionals with regards to periodontal care. The data obtained from the questionnaire was statistically analyzed and the results were computed.

RESULTS: The results of this study show that there is increase in the knowledge about periodontal disease in postgraduates and faculty compared to interns. It was observed that the awareness increased with the number of years of experience, however, across groups there was a deficiency in the knowledge with respect to latest treatment modalities available for periodontal disease.

CONCLUSION: The input from the survey can be used to organize periodontal health programs and awareness among professionals about periodontal disease and importance of treating the same.

Keywords: Knowledge, Periodontal disease, Medical professionals.

INTRODUCTION

Periodontal disease is one of the most prevalent oral diseases all over the world. The disease affects subjects in all age groups but is more common in the adult population [1]. In addition, oral-hygiene, diet, smoking, diabetes-mellitus, male gender, and various socioeconomic factors are considered as the risk factors for periodontal disease [2]. Periodontitis is often preceded by gingivitis, which in the early stages of the disease causes inflammation and bleeding. If not properly treated, it often proceeds to periodontitis with the destruction of connective tissues and finally results in tooth loss [3]. Periodontitis is also thought to influence systemic health including cardiovascular disease, diabetes mellitus, preterm low birth weight, and respiratory disease [4]. Health care professionals working in Chennai city interact with several patients each day. Health education plays an important role in the prevention of periodontal disease. Assessing and improving the existing knowledge about periodontal disease and its systemic manifestations among health care professionals will be beneficial to the society [5]. There is no study which has assessed the awareness of periodontal disease and knowledge about the availability of treatment techniques among medical professionals in Chennai city. Hence, the present study was planned to assess the same.

METHODS

150 medical professionals comprising of interns, postgraduates (PG), and faculty working in a medical institute were interviewed through a questionnaire [6]. They were interviewed at their workplace with a written questionnaire which included different topics such as basic knowledge of the periodontal disease, etiology of periodontal disease, and awareness about the availability of treatment for the same. The written questionnaire consisted of 20 questions with multiple choice answers. It was divided into three sections; the first section consisted of questions on basic knowledge about the periodontal

disease, the second section consisted of questions regarding etiology of periodontal disease, and the third section with questions regarding the awareness of the availability of treatment. Knowledge of the subjects was assessed based on their response. These responses were compiled, computed, and statistically analyzed for the result within the groups.

RESULTS

Distribution of subjects participating in this study is shown in Table 1. In the total of 150 subjects, 47.3% were female and 52.7% were male.

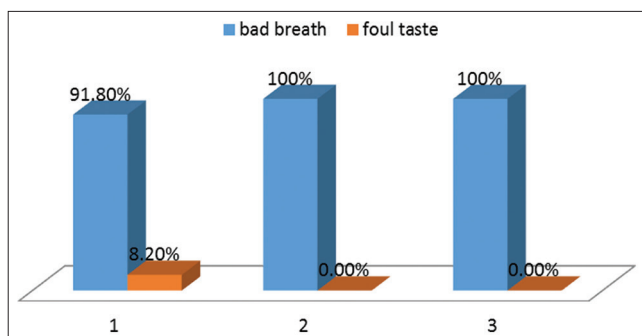
In the first section regarding the basic definition of halitosis (Graph 1), 91.8% of interns, 100% of PG's, and 100% of faculty said that halitosis is bad breath and 8.2% of intern, and none of the PG and faculty answered wrongly as bad taste.

The knowledge about the frequency of tooth brushing was shown in Graph 2, and knowledge about the frequency of dental visits was shown in Graph 3.

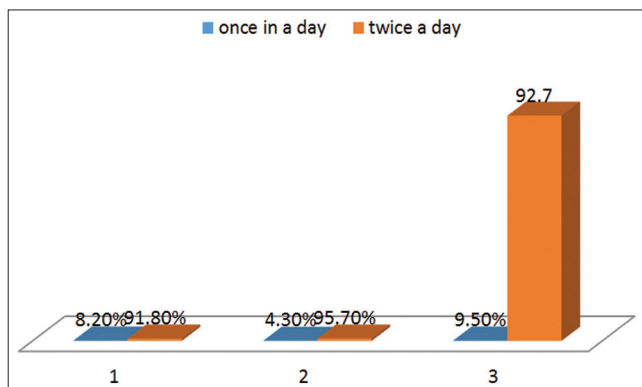
For questions regarding, the visit to the dentist when there is a bleeding from gums only 62.7% of people answered yes where the rest of 32.3% answered number for the cause of bad breath 24% of answered diabetes mellitus, 27.3% answered controlled hypertension, and 33.3% of answered gum disease.

Table 1: Gender distribution

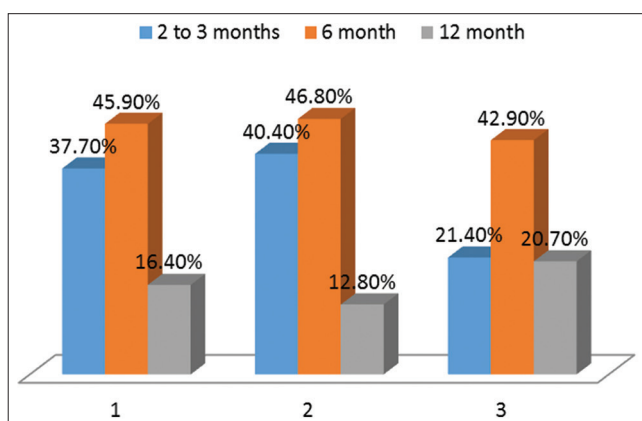
Gender	Frequency	Percentage
Male	79	52.7
Female	71	47.3
Total	150	100



Graph 1: Halitosis. 1: Interns, 2: Postgraduates, 3: Faculty



Graph 2: Frequency of tooth brushing. 1: Intern, 2: Postgraduates, 3: Faculty

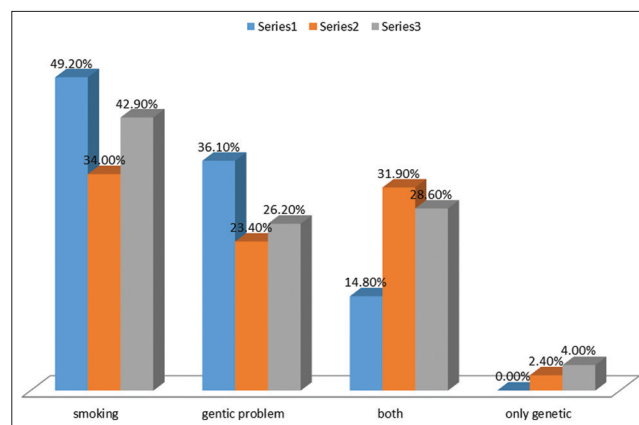


Graph 3: Frequency of dental visits. 1: Intern, 2: Postgraduates, 3: Faculty

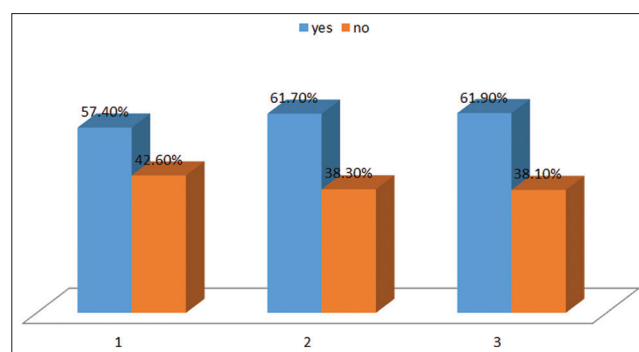
In the second section for the question regarding, the etiology of gum disease shown in Graph 4 represents that 49.2% of intern, 34% of PG, 42.9% of faculty says gum disease could be due to smoking, and 36.1% of intern, 23.4% of PG, 26.2% of faculty says gum disease could be due to genetic problems. Out of which, only 14.8% of intern, 31.9% of PG, 28.6% of faculty says gum disease could be due to both smoking and genetic problems.

Moreover regarding the concept of periodontal disease, Graph 5 shows that 60% of the subject agreed that diabetes mellitus is a risk factor of gum disease and 40% of them don't. Furthermore, Graph 6 provides knowledge about whether smoking affects the healing of periodontal disease or not.

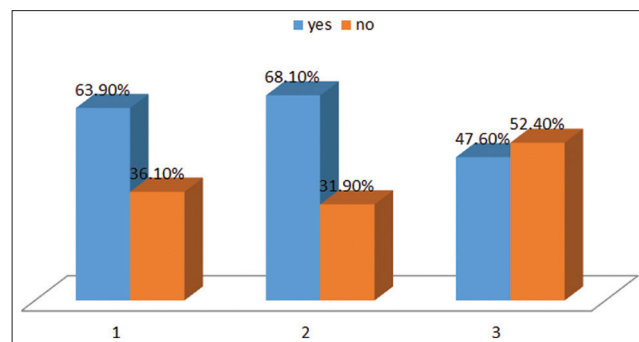
In the third section, the questions regarding the concept of the availability of treatment for periodontal disease, Graph 7 represents that 39.3% of intern, 36.2% of PG, and 42.9% of faculty said that



Graph 4: Etiology of gum disease. Series 1: Intern, Series 2: Postgraduates, Series 3: faculty



Graph 5: Diabetes as a risk factor for gum disease. 1: Intern, 2: Postgraduates, 3: Faculty

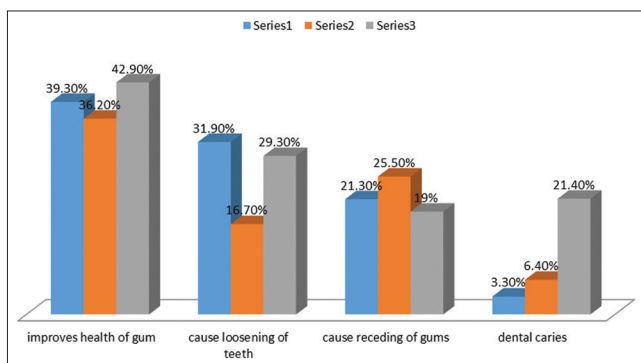


Graph 6: Smoking affects the healing of periodontal disease. 1: Intern, 2: Postgraduates, 3: Faculty

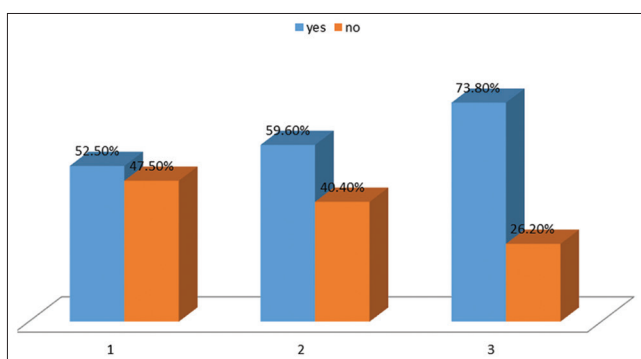
frequent teeth cleaning (scaling) causes improves gum health, whereas 36.1% of intern, 31.9% of PG, and 16.7% of faculty said that scaling causes loosening of teeth, and 21.3% of intern, 25.5% of PG, and 19% of faculty said scaling causes receding gums. Moreover, about the awareness regarding LASER used for the treatment of periodontal disease only 60.7% answered that they are aware of it, whereas the rest of them are unaware of it (Graph 8).

DISCUSSION

A team of well-trained and well-informed healthcare professionals can benefit the society. Healthcare professionals can act as good source of knowledge providers to the general public. Improving periodontal knowledge can play an important role in the prevention of periodontal diseases [7]. Hence, this study was designed to assess the existing knowledge of the health care professionals in Chennai city.



Graph 7: Effect of scaling. Series 1: Intern, Series 2: Postgraduates, Series 3: Faculty



Graph 8: LASER used for the treatment of periodontal disease. 1: Intern, 2: Postgraduates, 3: Faculty

In the present study, while assessing the definition of halitosis we found that the knowledge level among PG and faculty was better than that among the interns. In the first section, we assessed the basic knowledge of periodontal disease by the medical professionals, whereas PG showed better knowledge than interns and faculty. In the second section, we assessed the knowledge of etiology of periodontal disease, the result were equal among the intern, PG, and faculty. In the third section, we assessed the awareness regarding the availability of treatment for periodontal disease, the knowledge deficit was found among the interns.

The results of the current study show that PG and faculty seem to have more knowledge about periodontal disease than the interns. So, we can conclude that there is an increase in awareness with increase in experience. This could mean that there is the increase in knowledge acquired during the course of their PG curriculum and teaching years for PG and faculty, respectively, as compared to the interns. Hence, it is necessary that knowledge about the basic concepts and etiology of periodontal disease, and its treatment should be acquired during their UG training itself so that there is no knowledge deficit when they start their practice as a general practitioner. According to the study by Deinzer *et al.* [8], it shows that knowledge deficit was seen in all topics investigated in the given population. Severe knowledge deficit was seen in risks associated with periodontitis and risk factors for periodontitis.

CONCLUSION

This study shows that knowledge on the recent advances in the treatment of periodontal disease is the most needed for the medical professionals. Education and improvement of knowledge of health care professionals can improve the quality of care rendered to the patients with periodontal disease.

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ANNEXURE 1: QUESTIONNAIRE

Assessment of knowledge of periodontal disease among the group of health care professionals in Chennai city: A Questionnaire study.

Age:

Sex:

Course: Designation - Intern/Postgraduate/Faculty

Basic Knowledge

- 1) Halitosis is - Bad breath/foul taste
- 2) How many times should we brush daily?
 - (a) Once in a day
 - (b) Twice a day
 - (c) Once in 2 day
 - (d) Use only chemical mouth rinse and avoid brushing daily
- 3) One should visit a dentist once in 2-3 months/6 months/12 months
- 4) Do you there is a need to visit the dentist when there is a bleeding from the gums?
Yes/No
- 5) Do you think scaling can cause removal of enamel?
Yes/No
- 6) If your gums are brown, do you think they can be treated?
Yes/No
- 7) Bad breath is caused by
 - (a) Controlled diabetes mellitus
 - (b) Controlled hypertension
 - (c) Chewing of fibrous foods
 - (d) Gum disease
- 8) Gum disease means
 - (a) Decay of tooth with pain
 - (b) Disease of supporting structure of the tooth
 - (c) Gums growing into decayed tooth
 - (d) Disease of mucosa after removal of teeth

Etiology of Gum Disease

- 9) Gum disease could be due to
 - (a) Smoking
 - (b) Genetic problems
 - (c) Both a and b
 - (d) Only b
- 10) Gum disease can be associated with
 - (a) Malnutrition
 - (b) Obesity
 - (c) Short stature
 - (d) Both a and b
- 11) Gum disease causes
 - (a) Early loss of tooth
 - (b) No tooth loss
 - (c) Firm tooth
 - (d) Both b and c
- 12) Do you think diabetes is a risk factor for the gum disease?
Yes/No
- 13) Do you think genes play a role in gum disease?
Yes/No
- 14) Does smoking affect the healing of periodontal disease?
Yes/No

Knowledge About Treatment

- 15) Frequent teeth cleaning (scaling)
 - (a) Improves health of the gums
 - (b) Causes loosening of teeth
 - (c) Causes receding gums
 - (d) Dental caries
- 16) Gum disease can recur after dental treatment if
 - (a) Oral hygiene is not maintained
 - (b) Frequent scaling is done
 - (c) It never recurs
 - (d) None of the above
- 17) Surgical treatment for gum disease

- (a) Should not be done
 - (b) Should be done if necessary
 - (c) Is harmful to patient
 - (d) Should be done in systematically compromised patient
- 18) Are you aware that LASER is used for the treatment of periodontal disease?
Yes/No
- 19) Prevention of gum disease is
- (a) Responsibility of government of India
 - (b) Responsibility of dentist only
 - (c) Sharing of responsibility between dentist and patient
 - (d) Toothpaste manufacturing companies
- 20) Lower socioeconomic status causes more prevalence of gum disease because
- (a) Dentist is not interested in treating them
 - (b) Dental institutions are interested in treating them
 - (c) Poor oral hygiene and lack of affordability
 - (d) Both a and b