Knowledge of periodontal disease among various health care professionals

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Abstract
The aim of the study is to evaluate the knowledge, attitude towards the periodontal disease and its prevention among health care professionals. It is a cross sectional study. Around 150 subjects from nursing, physiotherapy and allied health science groups are selected for the study. The subjects are asked to answer 25 multiple choice question. Comparative graphs are made and discussed among the three groups of subjects for each question. These graphs help in evaluating the knowledge of periodontal disease in between the three groups. Various steps to be taken to improve the knowledge of the health care professionals regarding the periodontal disease and its prevention. This study shows an overall deficit in the knowledge about periodontal diseases among the health care professionals. The classes regarding the periodontal disease are required for the health care professionals for a better health education to the public and prevention of the periodontal disease.

Keywords: Health education, signs and symptoms, treatment modalities, screening program, awareness

1. Introduction
Periodontal diseases is one of the most prevalent diseases [1]. A high prevalence of periodontal diseases are noted among adult regardless of sex, race, education, residence or socio economic status. Periodontal disease is estimated to affect between 5 to 20 percent of population around the world and was found to be the sixth most common condition in the world [2,3]. A team approach between well trained and well educated health care professionals and dentist can benefit the society and can create a holistic approach to treat patients [2]. One of the main challenges towards this approach is lack of knowledge and awareness among health care professionals. Health education plays an important role in prevention of periodontal diseases [1,2]. Hence this study was conducted to assess the existing knowledge about the periodontal diseases and treatment modalities among the health care professionals. The main aim of the study is to find the attitude of the other health care professionals’ attitude towards the knowledge of periodontal disease and the prevention of the same.

2. Materials and methods
This is a cross sectional study. A total of 150 subjects are selected from Dr MGR University, ACS Medical College and Hospital, Chennai, Tamil Nadu, India. The health care professionals include three groups: nursing, physiotherapy and allied health science (pharmacy, anaesthesia, Lab technician, optometrist, cardiac care). 50 subjects from each group are selected. It includes 115 females and 35 males. The subjects are briefed about the study and informed consent was obtained from them. Ethical committee approval was obtained from the university. The questions are based on the definition, causes, signs and symptoms of the periodontal diseases. Risk factors and their impact on the systemic health were also included. The questionnaire consists of 25 questions. It includes demographic questions, personal attitude towards their oral hygiene, knowledge related questions, attitude and willingness in gaining the knowledge regarding the periodontal diseases and implement health education regarding periodontal diseases in their practice and career.

3. Results
Based on the answer’s we have obtained, the data’s are tabulated as graphs.
Nearly 60% of subjects have already been to the dentist (chart 1) among them 40% of subjects never visit the dentist once in a year or half yearly (chart 2). This shows a decreased awareness regarding oral hygiene.

Chart 1: Have you ever been to a dentist for treatment or checkup?

Chart 2: How often do you visit the dentist for cleaning your teeth?

Chart 3: How many times do you brush your teeth?

Chart 4: How often do you change your tooth brush?
Personal oral hygiene attitude: (chart: 3-chart 6)
Subjects are questioned regarding their oral hygiene such as brushing habit, brushing technique and use of oral hygiene aids. 50% to 60% of subjects brush their teeth once in a day. 25 to 40% of subjects change their tooth brush once in 3 months. About 50 to 75% subjects from the all three groups prefer the need of tongue cleaning. Nursing subjects are more aware of the use of dental floss than the physiotherapy and nursing group.
58% of subjects in nursing group are aware and 42% of subjects are not aware of specialties in dentistry. 96% and 38% of response “No” are reported by physiotherapy and allied health science group respectively.

**Chart 9:** Have you ever had patients with dental complaints?

Nearly 60% of subjects from nursing and physiotherapy group have encountered patients with dental complaints and none of the allied health science group has seen patients with dental complaints.

**Chart 10:** If a person is suffering from a sudden toothache, what will you do?

When they encounter patients with sudden toothache, about 90%, 56%, 64% responses from physiotherapy, nursing and AHS shows that they refer the patients to the dentist. However some advice analgesics for the toothache. When patients take analgesics there is decrease in pain and they never visit the dentist for further management until the pain recurs, which can further aggravate the problem and can also lead to serious problems.

**Chart 11:** Have you heard of the terms gingivitis and periodontitis?

More than 70% of nursing group answered “yes” and more than 75% from physiotherapy and AHS group answered “no”.
Chart 12: What, if yellow or greenish-yellow color deposits found near the gums, are known as?

Chart 13: What is the commonest cause for bleeding gums?

Chart 14: What is the commonest cause of bad breath?

Chart 15: Do you think coffee/tea cause staining of teeth?
Chart 16: What do you think is the commonest cause for loose teeth?

Chart 17: Do you think bad oral hygiene affects your general health?

Chart 18: What is the commonest cause for receding gums?

Chart 19: Have you ever seen patients with oral lesions or conditions?
Knowledge and attitude towards periodontal disease (chart: 11 - chart: 18)
Subjects are questioned regarding the terms, causes and treatment of periodontal diseases. Less than 60% of the total subjects have answered the questions correct. Thus there is a deficit in the knowledge regarding the periodontal disease and its signs and symptoms. When they gain knowledge regarding the periodontal disease they will be able to educate the patients better about future periodontal problems and treat the existing disease.

Chart 20: Frequent teeth cleaning (scaling)

Chart 21: Are you aware of surgical procedures for periodontal disease?

Only 55% of total subjects are aware of the need of scaling and more than 90% of total subjects are not aware of surgical techniques to treat the periodontal disease.

Chart 22: Do you counsel patients for good oral hygiene?

Less than 15% of subjects from each group only counsel patients to maintain a good oral hygiene because of poor knowledge regarding the periodontal disease and treatment needs.
Attitude and willingness towards gaining knowledge: (chart: 23-25)
85\% of subjects are interested towards gaining knowledge about oral hygiene instructions. However less than 60\% of subjects are willing to add classes regarding periodontal disease in their curriculum. But the remaining 40\% show a negative attitude towards gaining knowledge.

4. Discussion
From the results it’s obvious that the knowledge of periodontal disease is poor among the health care professionals. They must be knowledgeable to educate and counsel the patients, since oral health has an effect on the quality of the life and its association with the general systemic health of the individual.

The health care professionals should develop their communication skills to interact to the patients, since language acts as a barrier in uneducated people. They must be aware of the local language of the region they work or practice. Educating the public in one’s own language helps in better understanding and motivates them for maintaining a good oral hygiene\[^1, 4\].

Inclusion of dental education chapters in their curriculum is a requisite. Learning the oral anatomy helps them to better understand the characteristic features of the oral structure\[^5, 6\]. Thus they will be able to differentiate the signs and symptoms of the periodontal diseases or other oral lesions or conditions. This aids them in easy communication and referral to the...
dentist for the management. They must be taught about the commonest oral diseases and their signs and symptoms. The treatment protocol of the disease must be taught which helps in the proper management of the disease [3]. The impact of the oral disease in the systemic health must be known to create awareness among the patients to maintain both oral and general systemic health [8-10].

There is a general misconception about the routine dental treatments among the health care professionals. They must be posted in dentals schools for a certain period during their Under graduate training. Interaction between the dentist and health care professionals avails a better learning about the periodontal diseases and their treatment protocol which further helps them to explain patients regarding the treatment and motivate them for a good oral hygiene [11, 12].

A dental screening program is to be conducted for the health care professionals. Thus they can know their own oral health. It motivates the health care professionals to maintain a good oral hygiene which in turn helps in motivation of the patients.

Attending awareness programs regarding oral health helps them to gain the knowledge and gain interest in the oral health [13]. These awareness programs can motivate them to learn about oral diseases and makes them to educate the patients the steps to maintain a good oral hygiene such as brushing technique and using other oral hygiene aids [3].

Since the prevalence of the periodontitis is one of the epidemics in proportion in the world and due to its link towards the systemic diseases, health care professionals around the world can play an important role in identifying the disease and limiting is proportion [11].

5. Conclusion

Although professionals who had previous dental visit had some awareness regarding the oral diseases, oral health knowledge was poor among the health care professionals. There is also a need to improve the knowledge regarding the periodontal disease among the health care professionals. There is a need for structural training to be incorporated in their curriculum. Thus increasing their knowledge and their ability to educate their patients and people if their family and surrounding. They can create awareness among the public regarding the periodontal diseases. It’s high time to change the society’s perception about the dentist and dental hygienist who are being responsible for maintaining good oral hygiene in the world. One of the drawbacks of the study is the small sample size. Further cross sectional studies on a larger sample size will help us in understanding the need to improve their knowledge and awareness.

6. Reference

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