

Screening of patients attending the dental hospital to find out the most common dental problems among the people in a local community

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Abstract:

Background: Oral health has been defined as “the standard of health of the oral and related tissues which enables an individual to eat, speak and socialize without discomfort and embarrassment and which contributes to general wellbeing”. Thus oral hygiene is very important as the individual is crippled of his various activities in case of any defects in his oral health. The status of oral health or hygiene among the people of various age groups in a sub locality or a community tends to be different. The people may come to the dental hospital complaining of various dental problems. Hence this study was conducted to randomly analyse and screen patients of various age groups attending the dental clinic to find out the most common dental problems among people in a particular community.

Materials and Methods:

Results:

Conclusion: This study helps in identifying epidemiological status of oral diseases and contributes to prophylactic measures that can be taken at the community level. It also helps in creating the health care facility that caters the need of the community.

Introduction:

Dental problems are constantly on the rise and this is frequently associated with a change in lifestyle. Oral hygiene is very essential because the individual is crippled of his various activities in case of any defects in his oral health. The experience of pain, problems with eating, chewing, smiling and communication due to missing, discoloured or damaged teeth have a major impact on people's daily lives and well-being. Furthermore, oral diseases restrict activities at school, at work and at home causing millions of school and work hours to be lost each year throughout the world [1]. The status of oral health or hygiene among the people of various age groups in a sub locality or a community tends to be different. The people may come to the dental hospital complaining of various dental problems. The dental condition of the people in a locality tends to vary between various age groups and also varies with the economic status of different people. Management of oral health is also very important because oral health problems will indirectly have an Impact on other chronic diseases in the body. [2] Oral health affects the people physically and physiologically. It is also noted that several dental diseases and inflammations can lead to several systemic problems which can include cardiovascular diseases, bacterial pneumonia, low birth weight, diabetic complications and osteoporosis [3,4]. Good oral hygiene is also required for the proper healing of the oral tissues following a surgical procedure involving the gingiva, dental trauma, subluxation, oral cysts and can also occur following an extraction procedure. Presence of bacteria in the mouth as a result of poor oral health can adversely affect the wound healing process and thus can lead to other complications including sepsis. Oral health has been found to be overall

poor in the developing countries when compared to the developed countries of the world. Dental caries and periodontal diseases are found to be the most common disease manifestations in the oral cavity. In almost all the developing countries and also a few developed countries of the world. Dental caries is a bacterial disease which is caused by a particular strain of bacteria, namely streptococcus mutans. The incidence of dental caries is almost 100 percent in some of the developing countries of the world [5]. Dental caries are found to be more prevalent among the children when compared to adults. Dental caries are mainly induced by the diet. Cariogenic bacteria (streptococcus mutans), fermentable carbohydrates a susceptible tooth and time are all that is required for dental caries to occur at a particular site [6]. In young children, the bacterial flora and natural host defence mechanisms, which are essential for resisting caries are still under the process of being developed and so, young children and infants are more susceptible to dental caries when compared to adults. In rampant caries in young children, the pattern of decay is typically that many teeth are affected, with the caries developing rapidly often soon after the teeth have erupted [7]. Early childhood caries, also called rampant caries are directly proportional to the amount of sucrose which is ingested by an individual [8]. It is also found that inadequate calorific consumption and inadequate protein consumption will also lead to increased risk of acquiring early childhood caries. [9, 10]

Protein and calorific consumption was also found to be a factor in the development of dental caries in the adult (middle-age and also the elderly population) but the extent of its impact was lesser when compared to the effect of protein and calorific value in infants and the child population. [11] It was found that casein and whey protein solutions reduced the risks of dental caries by a considerable margin in the adult and child population alike [12]. Moreover, acute dental infection typically occurs when bacteria invade the dental pulp which has complete blood supply and spread to tissues surrounding the tooth. Radiographically, signs of tooth associated infection in the supporting bone are extremely common, affecting about 0.5-13.9% of all teeth in a large systematic analysis of cross sectional studies. In addition to localised disease, dental infections can spread regionally and haematogenous too, causing serious disseminated infections, especially in patients who are medically compromised such as cardiac diseases, systemic diseases, blood disorders and many more. Periodontal problems have been frequently associated with atherosclerotic heart disease. Streptococcus mitis and gemella hemolysans were found atherosclerotic and the oral plaques of elderly people with periodontitis [13]. Periodontitis is a slowly and continually progressive condition which usually manifests itself in the beginning as gingivitis. [14] Periodontitis, as a dental problem is more prevalent among the adults when compared to the children. Gingivitis, another prevalent dental condition in the developing countries, is the inflammation of the gingiva, followed by pain. Gingivitis, in general is found to be more prevalent in the males when compared to females except in the pubertal periods. Females exhibit more gingivitis prevalence during times of pregnancy. [15] Oral hygiene score is most closely correlated with gingivitis among all epidemiological factors. The most commonly implicated factors leading to gingivitis are smoking habits, fluoride use and recent antibiotic history. Moreover, a periodontal abscess represents an active period of [16] periodontal breakdown which occurs whilst there is a marginal closure of the deep periodontal pocket occluding drainage. Such abscesses develop in deep periodontal pockets without any external influence and are commonly seen in patients with untreated periodontitis either acute periodontitis or even chronic periodontitis or as a recurrent infection during a course of active treatment. Perio-endo abscesses which is basically the involvement of both endodontic and periodontal lesions which may affect a single tooth coincidentally leading to abscess formation. Thus diagnosis requires radiographic examination and vitality tests should be done before any treatment is initiated. Treatment of the combined lesion involves both endodontic and periodontal therapy. [17,18]

This study was conducted to screen the patients attending the dental hospital to find out what is the most prevalent dental problem that the people in a particular community are predisposed and advising the patients so that they have a better oral hygiene.

The objective of the study was to cater to the needs of the patients, providing them good dental treatment for their various dental problems and also to create an infrastructure.

Materials and methods:

100 patients attending Saveetha dental college and hospitals were randomly chosen for the study by convenience sampling technique. Oral consent was obtained and responses for a self-structured questionnaire was obtained which comprised of age, sex, educational qualification and presenting dental complaints. The obtained data was subjected to statistical analysis.

Results:

100 people were taken into our study and their chief oral complaint was recorded along with the history of the patient. Out of all the dental complaints that were noted, tooth ache was the most common chief complaint (35%). Following tooth ache, tooth sensitivity and gingivitis were the second most common chief complaint of the patient (11% each). 7 % of the patients complained of teeth spacing and another 7 % of the patients complained of discolouration of the teeth. 5 % of the people complained of missing tooth and another 5 % complained of other complications including mouth ulcer, orthodontic correction, inflammation of the salivary glands, nursing caries and palatal and tongue discolouration. 3 % of the people complained of bad breath, 3 % had edentulous jaws and wanted dental prostheses and 3 % of the people complained of referred pain in other parts of the face due to tooth ache. 2 % of the patients wanted a root canal treatment done and 2 % were trauma cases and had fractured teeth, 2% had oropharyngeal cancer, 2% had a fractured mandible and 2% complained of pain due to the eruption of the wisdom tooth (3rd molar). So, it can be seen that tooth pain/tooth ache was most prevalent in the patients visiting the hospital at an overall percentage of 35%. Tooth ache is a most common problem which is observed more in the developing countries when compared to the developed nations of the world. It is caused by a strain of bacteria, namely streptococcus mutans. Inadequate calorific consumption and inadequate protein intake is the most common risk factor which leads to dental caries. Rampant caries, observed in young children is highly erratic and can spread easily to other adjacent teeth because of the under developed nature of bacterial micro flora and

host defence mechanisms in the children. The most common dental complaints which was accounted for in our study is shown in figure-1.

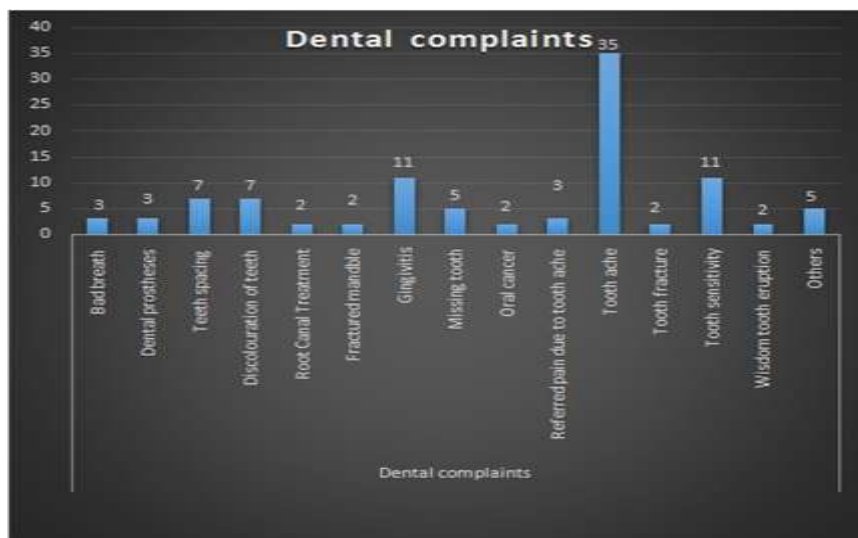


Figure-1 Common Dental Complaints

The prevalence of most of the dental problems was in the people between the age group of 20-50 years of age with 70 people falling under this category out of the 100 people included in our study. People between the age group of 10-20 years, were the second most prevalent with 13 people falling under this category. There were 16 people between the age group of 50-80. So, dental problems were most common in the people of age group between 20-50 years of age. This is shown in figure-2.

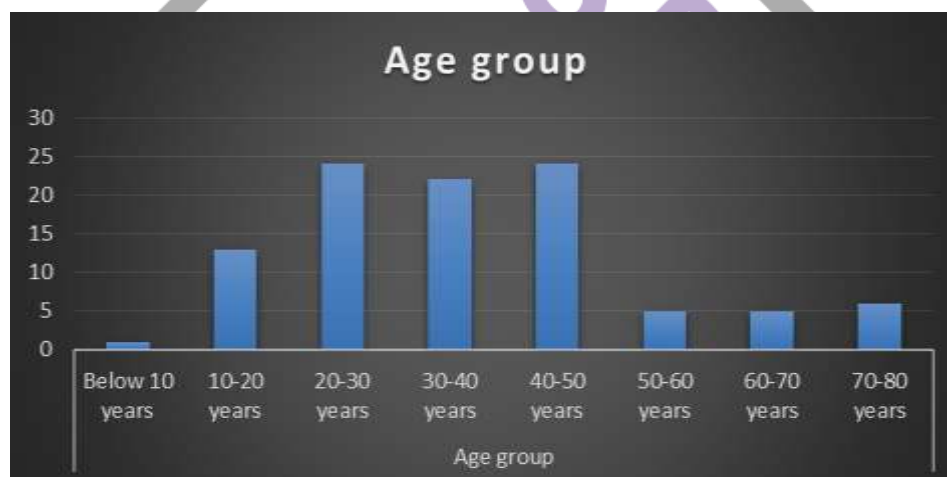


Figure-2: Age group distribution of study participants

Out of the 100 people included in our study, 65 people were males and 35 people were females. However, sex and dental complaints were not found to be correlated with each other. The graph is shown in figure-3.

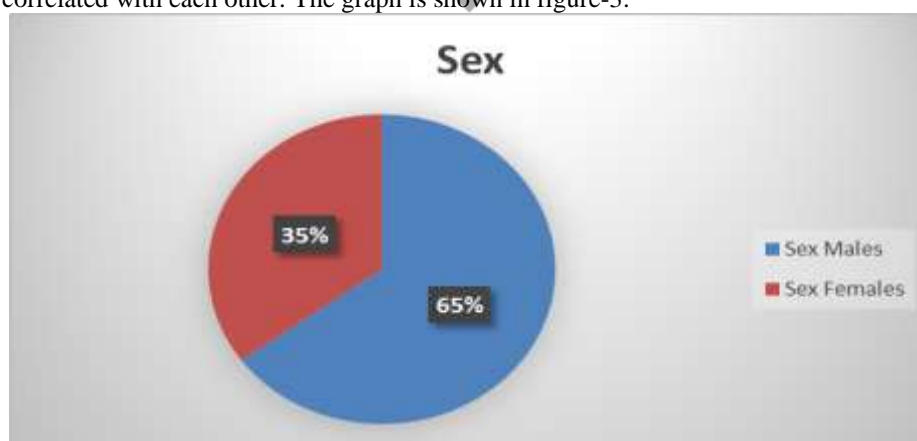


Figure -3 Sex distribution among study participants

Out of the 100 people included in our study, 51 % of the people were literates and 49 % of the people were illiterates. This is shown in figure-4.

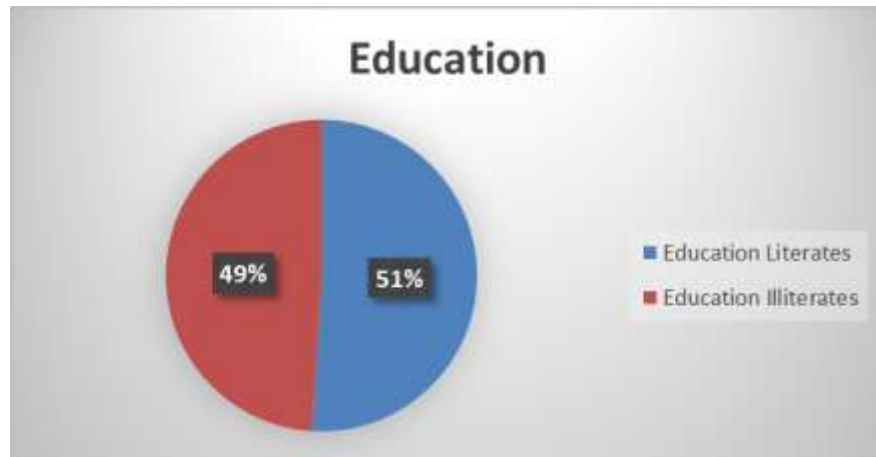


Figure-4 Educational qualification of study participants

Discussion:

Oral problems like periodontitis and gingivitis are constantly on the rise in the recent past. Awareness of periodontal problems by the public and their assessment by the practising dentist affect the levels of periodontal health. Many people do not recognize the symptoms of periodontal disease nor do they associate existing symptoms with the disease. Thus they do not perceive a need for professional or self-care. Most people in industrialized nations clean their teeth daily and visit the dentist at least once every 2 years. Yet, evidence suggests that levels of plaque and the incidence of bleeding gums are higher than expected either because people have not received individual instruction or they are not complying with appropriate regimens. Further, evidence suggests that many general dentists have low interest in the aetiology, prevention and treatment of periodontal diseases. It appears that such dentists have not retained their skills in the early recognition and diagnosis of periodontal diseases, nor in oral hygiene education or skill transfer. Likewise, only a small proportion of the general dentist's time is spent on prevention and periodontal care. To improve periodontal health, recommendations for the dental profession to pursue at the community, professional and individual levels are offered. Because orthodontists are treating more adult patients, they must take an active role in diagnosing periodontal problems before initiating orthodontic treatment. The orthodontist should incorporate a cursory 5 minute periodontal examination during the initial consultation with the patient. This is a simple screening examination. If problems are discovered, then referral to a periodontist for a more detailed diagnosis is appropriate. The screening examination involves probing key indicator teeth, evaluating attached gingival, and studying appropriate radiographs.

Conclusion:

Making a comparison of the age groups of a person and the various dental problems faced by them, it can be observed that dental caries leading to tooth ache is most prevalent among the people of age groups between 20-50.[18] Furthermore, dental caries remains the most important dental health problem in all the upcoming and developing countries. In India the prevalence of dental caries is reported to be about 50-60%. Most of the Indian studies have been carried out in school children and very few in adults. Various reasons can be put forward to decipher the intensity of dental caries, such as biochemical differences in salivary buffering to differences in living environment, dietary and habits, different proportions of salivary components, and also possible differences in chemical composition of the saliva. It is evident that they lack knowledge about proper brushing techniques which was one of the main reasons for high rate of dental caries.[19] Whilst oral health awareness is provided through media, it is imperative that these individuals should be taught practically through biannual oral health promotion camps and sequential screening assessments. Early identification of caries and proper guideline measurements for maintenances of oral hygiene should be well informed to the particular individuals. Healthful knowledge, when allowed to influence our attitude and practice is capable of reducing the amount of disease occurrence. Knowledge influences people's health through basic education and public knowledge.[20] By this, individuals become aware of the meaning of self-protection and personal hygiene.

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