

REVIEW ARTICLE

Need for oral health awareness among students in Nigeria

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ABSTRACT

Oral health refers to a state of not having chronic orofacial pain, oral and throat cancers, or birth defects, oral infections and ulcers, periodontal disease, tooth loss, and other disorders that affect the oral cavity. Oral health awareness remains an excellent means of promoting the upkeep of people's oral health by the dental team. Oral health is usually not taken seriously, but it is an essential part of our daily life. Good oral health awareness among people will enhance the power to talk, smile, smell, taste, touch, chew, swallow, and convey feelings among other emotions through facial expression as a result of individuals being attentive to oral health and maintaining it. Several studies focused on selected Nigerian student-populations have indicated a low level of oral health awareness and poor attitudes to oral health matters. This may be because people are not well informed about the steps required to prevent oral diseases or treat them. Concerning dental visiting habits, also, people are quite indifferent. The most frequent reasons for visiting are having a toothache, a perceived need for tooth extraction, and a need for prosthetic treatment. To handle the low level of oral health awareness that pervades the Nigerian student community at the present, it is important to prime the combined efforts of Dental Health Care Professionals (DHCP), the government, and non-governmental organizations in tackling the menace by urgently improving access to oral health information and education, especially, among students.

INTRODUCTION

According to Adamu & Enejo (2013) and Sheiham (2016), the compartmentalization involved in viewing the mouth separately from the rest of the body must cease because oral health affects general health. Oral health impacts the overall health and quality of life. Patients with chronic disease such as diabetes are at risk for oral complications; untreated late stage of oral diseases results in significant and wasteful health care spending. Moreover, a series of

intriguing new reports demonstrate the potential benefits of addressing oral diseases.

Oral health is frequently not taken seriously, but it is an essential part of our daily life (Adamu & Enejo, 2013); good oral health awareness among people will enhance, the ability, to speak, smile, smell, taste, touch, chew, swallow and convey our feelings among other emotions through facial expression as a result of individuals being aware of oral health and maintaining it. The studies that

have been carried out on selected population groups in Nigeria indicated a low level of oral health awareness and poor attitudes to oral health matters (Sofola, 2010 & Peterson, 2003).

Oral health awareness remains a great means of promoting the maintenance of good oral health by the dental team (Sofola, 2010 & Adamu & Enejo, 2013).

CONCEPT OF 'ORAL'

According to Aballa (2016), the word 'oral', both in its Latin root and common usage refers to the mouth. The mouth includes the teeth, the gum, their supporting connective tissues, ligaments, bones, hard and soft palate, the soft mucosal tissue lining of the mouth, the throat, the tongue, the lips, the salivary glands, muscles of mastication as well as the upper and lower jaws, which are connected to the skull by the temporomandibular joints (TMJs). And according to Goyal and Shaker (2016), the mouth's primary role is the intake and initial digestion of food, and it is important in the formation of speech in humans.

ORAL HEALTH

The World Health Organization (WHO) (1983) (as cited in Aballa, 2016), defined oral health as the retention throughout life of a functional, aesthetic, and natural dentition of not less than twenty (20) teeth and not requiring recourse to a prosthesis. It is regarded as the process of maintaining a functional, structural, aesthetic, physiologic, and psychosocial state of well being, which is essential for an individual's general health and quality of life (Yee & Sheiham, 2002). And as defined by Grewal and Kaur (2007), it is the physical, psychological, and social wellbeing concerning oral status. It is a state of being free from mouth and facial pain, oral and throat cancers, oral infections and sores, periodontal and gum diseases, tooth loss, and other disorders that limit a person from biting, chewing, speaking, and psychosocial wellbeing (Yee & Sheiham, 2002; Gussy et al., 2008).

ORAL HEALTH AWARENESS

The prevalence of diseases among people in a community is mostly due to their culture, social behaviour, and their lifestyles. The control of the occurrence of these diseases therefore depends on the intervention strategies that lead to positive changes in behaviour and lifestyles. It follows therefore that the expansion of health facilities, the regular training of medical personnel, without giving attention to

health education to create awareness on the need for a change in behaviour of harmful lifestyles affects both individuals and society (Gbefwi, 2005).

Oral health awareness remains a great means of promoting the maintenance of good oral health by the dental team. The studies carried out on different population groups in Nigeria indicate a low level of awareness and poor attitude to oral health awareness. This is because people are not well informed on the steps to be taken in preventing oral diseases as well as their treatment (Sofola, 2010). As regards dental visiting habits, people's perceptions are quite indifferent. The most frequent reasons for their visits were toothache, a perceived need for tooth extraction, and prosthetic treatment (Peterson, 2003).

To be effective, methods used in dental health education and creation of awareness should be planned and carried out skillfully. The aim must not only be to instruct but also to influence; success depends greatly on sincerity and interest shown by each member of the dental team (Andlaw & Rock, 1999).

IMPORTANCE OF ORAL HEALTH AWARENESS

As posited by Aballa et al. (2018), it is important to note that oral health forms an integral part of general health and therefore is affected by other factors that influence health generally. Oral health awareness should be started at a very young age, children should be taught the importance of keeping their teeth healthy and clean (Desai, 2014).

Good oral health

- i. enhances general wellbeing.
- ii. serves as an indication that there is no serious systemic condition present in the body; this is because some major systemic problems manifest in the oral cavity.
- iii. promotes good and healthy communication.
- iv. enhances aesthetics.
- v. prevents oral diseases.

(Aballa et al., 2018).

ORAL HEALTH PROBLEMS ASSOCIATED WITH LOW ORAL HEALTH AWARENESS

Low oral health awareness brings about poor oral hygiene. Some of the conditions associated with poor oral hygiene include:

1. Dental caries - [Aballa et al. \(2018\)](#) defined dental caries as an infection of bacterial origin with the production of acids. It is an irreversible microbial disease of the calcified tissues of the teeth, characterized by demineralization of the inorganic portion, and destruction of the organic substance, of the tooth ([Pandula, 2012](#)). It is a result of the formation of dental plaque, which harbours bacteria, which in turn ferment carbohydrates available in daily food, producing acids ([Pandula, 2012](#)). [Pandula](#), further stated that this production of acid decreases the pH below 5 and that prolonged exposure to low pH leads to demineralization of the tooth structure with which it comes in contact.

2. Periodontal disease - They are the pathological processes that affect the periodontal tissues, however, they usually refer to inflammatory conditions, namely gingivitis and periodontitis. They are diseases affecting all the components of the periodontium namely the gingiva, periodontal ligament, alveolar bone, and cementum ([Aballa, 2016](#)).

Gingivitis is an early stage of periodontal disease caused by the buildup of plaque, a naturally occurring biofilm that surrounds the teeth; its symptoms include red, swollen, and bleeding gums in addition to bad breath (halitosis). Its causes are bad oral habits (like bad brushing habits and smoking), which are associated with poor oral health awareness ([Oral B, 2018](#)).

Periodontitis is often known as gum disease; it is the inflammation of the gums and the supporting structures of the teeth ([European Federation of Periodontology \[EFP\], 2018](#)). Periodontitis destroys the bones that support the teeth and can loosen, or lead to the loss of, a tooth, and is usually brought about by poor oral hygiene ([Mayo Clinic, 2018](#)).

3. Halitosis - This is also known as 'fedor oris' and it can cause embarrassment and anxiety ([Newman, 2018](#)). Bad breath can be caused by certain diseases, however, poor oral hygiene is the most common cause. [Newman](#) further stated that the best way to reduce halitosis is through good oral hygiene. Oral hygiene can be enhanced by good oral health awareness.

4. Dental stains - They are pigmented deposits on the tooth surface. The oral cavity is subjected to many types of

exogenous and endogenous substances that can stain the teeth ([Aballa, 2016](#)). According to [Aballa](#), There are two types of stains -

- a) Extrinsic stains - They are those stains that can be easily removed and are due to salivary components or food substances that are taken into the mouth which tend to discolour the teeth. They include tobacco stains, black stains, and brown stains and
- b) Intrinsic stains - Stains that are incorporated into the tooth structure and cannot be removed by scaling instruments; examples are stains associated with tetracycline therapy.

IMPLICATIONS OF LOW ORAL HEALTH AWARENESS IN NIGERIA

According to [Sofola \(2010\)](#), there is low or poor oral health awareness in Nigeria. This has implications for oral health status, general health, and access to care.

- i. Implications on oral health status - When there is low oral health awareness there is a direct effect on the treatment-seeking behaviour of the individual and population ([Sofola et al., 2004](#)). People are not well informed about the steps to take as well as treatment of these diseases; there is subsequent under-utilization of oral health facilities or services and late presentation at the clinic with resultant complications ([Umesi-Koleoso et al., 2007](#)). Chronic periodontal diseases are highly prevalent among Nigerians right from the independence days to date and studies have shown that over 75% of Nigerians need scaling and polishing and plaque control ([Sofola et al., 2004](#)).
- ii. Implications on general health - Oral health is an integral part of general health. For a long time, oral health has been treated in isolation from general health but with a growing understanding of the interrelationship between the two, dental patients must be seen beyond their mouth by dentists and beyond their systemic health by doctors ([Sofola, 2010](#)). [Sofola](#) also noted that current research works have linked the condition of the oral cavity, especially plaque accumulation and periodontal health to several systemic diseases. A meta-analysis of observational studies found that subjects with periodontal diseases have higher odds and risks of developing cardiovascular disease ([Blaizotet et al.,](#)

2009). Randomized clinical trials have also demonstrated that people with diabetes were 2.5 to 4 times more likely to develop periodontal diseases than non-diabetics (Mealey & Rose, 2008). There is accumulating scientific evidence that shows the biological plausibility of oral infections causing pregnancy complications such as preterm or low birth weight babies (Saddki et al., 2008).

- iii. Implications on access to care - Failure to access oral health care could be a result of a lack of perceived need for treatment by patients. This is often a function of the level of awareness of oral diseases and their prevention. This gap may be bridged by oral health education (Sofola, 2010).

IMPROVING LOW ORAL HEALTH AWARENESS

For a broad-based approach to addressing low oral health awareness, there is a need for combined efforts among Dental Health Care Professionals (DHCP), the government, and non-governmental organizations as suggested by Olusile (2010).

The roles of DHCP include:

- A. Dissemination of oral health education - Oral health education is the provision of oral health information either to an individual or the community in such a way that they will apply it in their everyday life or living (Jeboda, 1998; Adamu & Enejo, 2013). This has an incisive role to play as part of a broad-based approach to addressing inadequate awareness. Professional oral health education must be given, even, to the most remote part of the country, and must be sustained for a length of time, and continuous education has a positive impact on the disease process (Jeboda, 1998). And according to Olusile (2010), it is quite simple, and sophisticated treatment and techniques are not needed.
- B. Use of allied and non-dental personnel - Dentists should allow expanded use of non-dental personnel, expanded use of existing allied dental personnel and now emerging types of dental personnel to provide oral health assessment and other services (Jeboda, 1982).
- C. Volunteerism - Dentists should be ready and willing to render voluntary dental services in rural areas of the country (Olusile, 2010).

- D. Rural community practice - Dentists should be ready to practice or serve in rural communities and dental students should be made to do their community postings in some rural communities (Olusile, 2010).

The roles of the government, as given by Olusile (2010), include that government should:

- a. Place a high priority on health
- b. Provide facilities for oral health care to improve accessibility
- c. Sponsor researches into dentistry
- d. Encourage training of dental personnel
- e. Catalyse the evolution of appropriate oral health policies
- f. Develop school programmes to include oral health care, free dental care for children, etc.
- g. Operationalize health insurance scheme to include oral health care.

The roles of Non-Governmental Organizations (NGOs) as given by Olusile (2010), are:

- a) Supporting preventive dentistry activities by dentists and dental students
- b) Providing or supporting dental chairs in dental schools and giving grants for community-based or preventive dentistry research activities.

There is no doubt that oral health awareness in Nigeria is low and we need an enormous amount of political goodwill on the part of the policymakers to improve oral care delivery and the establishment of a structured oral health policy for Nigeria is of utmost importance (Sofola, 2010). As suggested by Sofola, while we wait for the government to play its role, health professionals need to establish NGOs with goals to improve oral health knowledge and perceptions.

METHODS OF DISSEMINATING ORAL HEALTH AWARENESS

These methods are strategies/processes through which oral health information and skills are presented to the target group during health awareness programmes; these methods are not in themselves learning opportunities but of effective use in health awareness (Gbefwi, 2005).

According to Park (2002), there is no single teaching method that is best suited for all situations, the dental personnel should be aware of the wide range of teaching methods available and be prepared to select that method of delivery that best suits the lesson content, location, the group, and the allocated population.

Some of the various methods used in delivering oral health talks or disseminating oral health information include:

1. Lectures and talks- This involves a straight forward discussion, a pre-planned structured scheme delivered on a topic. The main value is to present a topic to a large audience of a target group. It is a common method of providing scientific health information. This method has been overused to the extent that it is mistakenly considered an effective way of imparting knowledge to clients. Its effect and success depend on the dramatic qualities, personality, and on the health practitioners; furthermore, the use of visual aids enhances its use. This method is ideal for developing knowledge and decision-making skills (Ikechukwu, 2017 & Aballa et al., 2018).
2. Demonstration method - This method is useful mainly in teaching practical skills. There is a limit to the size of the group to which a practical demonstration is suitable. Ideally, this method is restricted to individuals and small groups. Everybody in the group should be able to see any models or other equipment. The instructions should be related to the individuals in the group (Aballa et al., 2018).
3. Roleplay method - This is a very informal method particularly suitable for creating changes in attitude. In this method, the 'surgery' can be used or a setting can be arranged to appear like the 'surgery' where children may act as dentists, dental therapists, e.t.c. (Aballa et al., 2018).

Other methods include the use of visual aids to teach individuals by stimulating the sense organs and the materials involved are chalkboards, posters, and charts (Mahesh et al., 2002).

THE NEED FOR ORAL HEALTH AWARENESS

Oral health is often taken for granted, but it is an essential part of our everyday life, good oral health awareness among people will enhance the ability, to speak, smile,

smell, taste, touch, chew, swallow and convey our feelings or emotions through facial expression as a result of individuals being aware of oral health and maintaining such (Centers for Disease Control and Prevention [CDC], 2010). Attainment of good oral health is based on awareness of good dietary habits and oral hygiene practices. The need for making parents aware of ideal tooth brushing methods and the importance of prioritizing preventive measures for children through school dental programmes should be highlighted (Kaur, 2009). The message should be kept simple for proper understanding.

NEED FOR ORAL HEALTH AWARENESS AMONG STUDENTS IN NIGERIA

A study conducted by Ikechukwu (2017), among students attending Zenith International School, Okposi, Ohaozara LGA Ebonyi State, Nigeria indicated that among the 180 students surveyed, the age range '21 years and above' had the highest level of oral health awareness (15.56%). It was also observed that the commonest source of oral health information among them was the television (23.89%), and the class with the highest level of oral health awareness was SS3 (10.56%). The researcher also observed that female participants had better knowledge of oral health (23.89%) than male participants. The most interesting finding of the study was that 57.78% of the participants were not aware of oral health matters.

Another study carried out by Eze (2017), on oral health awareness among students attending Community Secondary School, Nru Nsukka, Enugu State, Nigeria revealed that out of the 180 students involved in the study, 77.78% had satisfactory knowledge of oral health while the remaining 22.22% were deficient in their knowledge of oral health. The study also reported that students between 16-18 years of age had a fairly high knowledge of oral health matters.

Nwobodo (2015) studied oral health awareness among students attending Gama Success International College, Ifo Layout Abakpa-Nike, Enugu, Nigeria. This study revealed that 85% of the students responded positively to the knowledge of oral health (45% females and 40% males). Students between 13-16 years had enhanced awareness of oral health matters. Similar research conducted by Nwobodo (2013), dubbed 'dental health awareness among students attending Divine Love Secondary School, Trans-Ekulu, Enugu State, Nigeria', the researcher concluded

that the level of dental health awareness among the students was low. This, according to the researcher, was due to negligence, poor attitudes to oral health matters, poor knowledge, and lack of financial resources.

There is a need for these students to be well educated and enlightened on the proper oral health behavior, attitudes, and practices for them to maintain their oral health as well as pass on the right information to others.

Talking about low oral health awareness, the study of [Agu \(2012\)](#) lends credence to the narrative. Their research, which was conducted at the Girls Secondary School, Obe Nkanu-West LGA of Enugu State, Nigeria inferred that there was poor oral health among the students. This could be attributed to a low level of oral health awareness, poor oral hygiene, and lack of dental facilities around the study area. These were also confirmed by the researcher.

The oldest work reviewed in this research work was the survey conducted by [Akaji et al. \(2017\)](#) to know the extent of oral health awareness by assessing the utilization of dental services among secondary school students in Lagos, Nigeria. This study revealed that the utilization of dental services by students was very low and the standard measure of one visit per year was not met. So there is a need, according to this research, for school oral health programmes to be promoted and dental check-ups encouraged among students, especially secondary school students.

CONCLUSION

To handle the low level of oral health awareness that pervades the Nigerian student community at the present, it is important to prime the combined efforts of Dental Health Care Professionals (DHCP), the government, and non-governmental organizations in tackling the menace by urgently improving access to oral health information and education, especially, among students.

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