

ORAL HEALTH PROMOTION: A DOOR TO GOOD HEALTH AND HEALTHY LIVING

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Abstract

Good oral health is a key indicator of overall health, wellbeing and quality of life because it is a state of being free from chronic mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal (gum) disease, tooth decay, tooth loss, and other diseases and disorders. The most common oral diseases globally are; dental caries (tooth decay), periodontal (gum) diseases, oral cancers, oral manifestations of HIV, oral-dental trauma, cleft lip and palate. Due to the overall importance of a positive oral health to individuals, this paper presents a broad review of extant literature on oral health promotion as a gateway to good health under the sub-headings of oral diseases and conditions, the need for good oral health, and healthy ways to ensure good oral health. Summarily, summative findings from literatures revealed that how well an individual cares for the teeth and gums exerts substantial effects on the overall health. In this respect, it is imperative that a good oral health is the determinant to a healthier body and mind because it reduces the risk of numerous bacterial borne diseases and some non-communicable diseases (NCDs). Consequently, it is necessary to understand the importance of a good oral hygiene, and the need for the implementation of a proper oral care routine right from childhood.

Keywords: *Oral health, promotion, Wellbeing, Healthy life, Healthy tooth.*

Introduction

Oral health is a key indicator of overall health, wellbeing and quality of life. The World Health Organization (WHO) defines oral health as a state of an individual to be free from chronic mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal (gum) disease, tooth decay, tooth loss, and other diseases and disorders that limits the capacity in biting, chewing, smiling, speaking, and psychosocial-wellbeing (WHO, 2003). Several people worldwide suffer from oral health, and many health systems globally neglected it for no just cause. Oral diseases of varying nature and magnitude can manifest across many social-demographic divides due mainly to poor lifestyles which means that despite the burden of oral diseases which may be frightening, a lot can be achieved through appropriate lifestyle and behavioural changes as most oral diseases are preventable. This review provides a comprehensive look on positive oral health and its beneficial effects for the overall good health and wellbeing.

Common Oral Diseases and Conditions

There are basically eight oral diseases and conditions which account for most of the oral disease burden worldwide, they include dental caries (tooth decay),

periodontal (gum) diseases, oral cancers, oral manifestations of HIV, oro-dental trauma, cleft lip and palate, and noma (WHO, 2018). Fortunately, almost all the oral diseases and conditions mentioned above are either largely preventable and could be treated in their early stages. The brief descriptions of the common forms of oral diseases are further provided.

i. Dental Caries (Tooth Decay)

Dental caries results when microbial biofilm (plaque) formed on the tooth surface that converts the free sugars contained in foods and drinks into acids that dissolve tooth enamel and dentine over time. With the continued high intake of free sugars, inadequate exposure to fluoride and without regular microbial biofilm removable, tooth structures are destroyed, resulting in development of cavities and pain which eventually impacts the oral-health-related quality of life, and in the advanced stages, tooth loss and systemic infections could occur (WHO, 2018). Moronkola (2020) noted that a decayed tooth cannot repair itself and once it cannot be saved, it should be extracted. The disease is commonly believed to be common among children and be caused by consumption of sweetened foods, mouth bacteria or by dental plaque.

ii. Periodontal (Gum) Disease

Periodontal disease affects the tissues that both surround and support the tooth, and often presents as bleeding or swollen gums (gingivitis), pain and sometimes as bad breath especially due to poor oral health practices and or tobacco smoking, while in its more severe form, it leads to loss of gum attachment to the tooth and supporting bone, thereby causing “pockets” and loosening of teeth (periodontitis).

iii. Tooth Loss

Dental caries and periodontal diseases are the major causes of tooth loss, while severe tooth loss and edentulism i.e. (no natural teeth remaining) are widespread and particularly seen among older people globally. In addition, severe tooth loss and edentulism was one of the leading ten causes of years lived with disability (YLD) in some high income countries due to their aging populations (Vos, Abajobir, Abate, Abbafati, Abbas, Abd-Allah, et al, 2017).

iv. Oral Cancer

Oral cancer includes cancers of lip and all sub sites of the oral cavity, and or pharynx. Oral cancer is more common in men, in older people, and varies strongly by socio-economic condition. For instance, in some Asian-Pacific countries, the incidence of oral cancer ranks among the three top cancers, and majorly caused by the excessive use of tobacco, alcohol and areca nut (betel quid), while in regions like North America and Europe, “high risk” human papillomavirus (HPV) infections are responsible for a growing percentage of oro-

pharyngeal cancers among young people (Ferlay, Lam, Colombet, Mery, Piñeros, Znaor, et al, 2018; Mehrtash, Duncan, Parascandola, David, Gritz, Gupta, Mehrotra, Amer, Pearlman, Warnakulasuriya, Wen, Zain & Trimble, 2017; Warnakulasuriya, 2009).

v. Oral Manifestations of HIV Infection

Oral manifestations of HIV are in form of candidiasis (oral thrush), fungal, viral or bacterial infections which can be detected in people with especially those not on antiretroviral therapy (ART). Oral HIV lesions cause pain, discomfort, dry mouth, eating restrictions and are a constant source of opportunistic infection. Importantly, early detection of HIV-related oral lesions can be used to diagnose HIV infection, monitor the disease's progression, predict immune status and result in timely therapeutic intervention (WHO, 2018). The treatment and management of oral HIV lesions can considerably improve oral health, quality of life and wellbeing in people with the condition (WHO, 2018).

vi. Oro-Dental Trauma

Oro-dental trauma is an impact injury to the teeth and/or other hard or soft tissues within and around the mouth and oral cavity, while the world prevalence of traumatic dental injuries in either dentition (primary and permanent) is around 20% (Lam, 2016; Petti, Glendor & Andersson, 2018). Usually, this dental condition can be caused by violence e.g street fight, accident, risky behaviour, combative sport, and due to its seriousness, it may result in tooth loss and other health conditions that may take time to heal, and which may be with cost and other psychological implications.

vii. Noma

Noma is a necrotizing disease that affects children between the ages of 2 and 6 years suffering from either malnutrition, affected by infectious disease, living in extreme poverty and with weakened immune systems. Noma is mostly prevalent in sub-Saharan Africa but rare cases have been reported in Latin America and Asia as well (WHO, 2018). In most times, noma starts as a soft tissue lesion (a sore) of the gums inside the mouth, the initial gum lesion then develops into an ulcerative, necrotizing gingivitis that progresses rapidly thereby destroying the soft tissues and further progressing to involve the hard tissues and skin of the face. In 1998, the WHO estimated that there were 140, 000 new cases of noma annually (WHO, 2017). Without treatment, noma is fatal in 90% of cases, but if detected at an early stage; its progression can be rapidly halted through basic oral hygiene, antibiotics and nutritional rehabilitation (WHO, 2018). As a consequence, early detection helps to prevent suffering, disability and death, but survivors suffer from severe facial disfigurement, experiences difficulty in

speaking and eating, faces social stigma, and usually requires complex surgery and rehabilitation (WHO, 2017).

viii. Cleft Lip and Palate

Clefts of the lip and palate are heterogeneous disorders that affect the lips and oral cavity and occurs either alone (70%) or as part of a syndrome affecting more than 1 in 1000 newborns worldwide (WHO, 2018). Although, genetic predisposition is an important factor for congenital anomalies, other modifiable risk factors such as poor maternal nutrition, tobacco consumption, alcohol and obesity during pregnancy also plays a vital role (Mossey, Little, Munger, Dixon & Shaw, 2009). Most times, if lip and palate clefts are properly treated by surgery, complete rehabilitation is possible in people with the condition (WHO, 2018).

The Need for Good Oral Health

General causes of oral health problems are serious consumption of sugar, heavy alcohol and tobacco consumption which may also lead people to be prone diabetes, cardiovascular diseases and cancer. There is need for personal oral health which includes use of fluoride toothpaste and soft brush, prompt treatment of oral health problems etc. Although, practicing good oral hygiene ultimately benefits the teeth and gums, it does not end there because engaging and practicing good oral hygiene have other numerous health advantages which benefits the entire body and the overall state of health of an individual. Consequently, the following are some of the beneficial effects of good oral hygiene:

i. Reduced Risk of Gum Disease

One of the most obvious benefits of good oral hygiene is a reduced risk of gum disease because those who do not brush their teeth and floss on a regular basis are susceptible to conditions like gingivitis and periodontitis. These diseases can cause bleeding, swelling, bad breath, tooth loss and other problems.

ii. Reduced Risk of Tooth Decay

Another major benefit of good oral hygiene is a reduced risk of tooth decay because individuals who eats sugary foods and forego brushing and flossing will often develop cavities, and in the long-run might start to lose teeth. To keep the tooth strong and healthy, good oral hygiene is imperative at all times.

iii. Reduced Risk of Heart Disease

Chronic oral infection is an established risk factor for heart diseases because when the bleeding of the gum occurs due to gum disease, bacteria from the mouth can enter the bloodstream and spread throughout the body, and if bacteria travel

to the heart, it could contribute to be a major risk for heart attack (Coll, Lindsay, Meng, Gopalakrishna, Raghavendra, Bysani & O'Brien, 2019). In addition, research shows that individuals with significant dental issues suffer more heart attacks and strokes than those without the condition. Specifically, a study on causal association between periodontitis and hypertension, evidence from the randomization and randomized controlled trial of non-surgical periodontal therapy revealed that there is a causal relationship between periodontitis and high blood pressure (Czesnikiewicz-Guzik, Osmenda, Siedlinski, Nosalski, Pelka, Nowakowski, Wilk, Mikolajczyk, Schramm-Luc, Furtak, Matusik, Koziol, Drozd, Munoz-Aguilera, Tomaszewski, Evangelou, Caulfield, Grodzicki, D'Aiuto & Guzik, 2019). Importantly, regularly brushing and flossing the teeth are a good starting point in promoting whole-body health.

iv. Reduced Risk of Diabetes

Type 2 diabetes is a potentially serious condition that can lead to disability and early death. Usually, type 2 diabetes develops due to excessive increase in the blood sugar levels either because the body cannot manufacture enough insulin or failure of the body to use it properly. Insulin is a hormone that helps the body use blood sugar for energy. Likewise, there is a fairly well-known link between poor oral health and diabetes because as gum disease arises, it causes a rise in blood sugar levels in the body (Kocher, König, Borgnakke, Pink & Meisel, 2018). One indicator of diabetes is the presence of higher sugar levels in the blood. In this respect, in case an individual is diabetic or at risk of diabetes, then it is imperative to take personal oral hygiene very seriously.

v. Reduced Risk of Lung Disease

Several studies have shown a connection between lung disease and bad oral health (Yamada, Yurikusa, Furukawa, Tsubosa, Niihara, Mori, Asoda, Kawana, Kitagawa & Nakagawa, 2019; Sato, Motoyama, Takano, Nakata, Liu & Harimaya, 2016). As the gums become inflamed and causes rise in bacteria, the bacteria could travel to the lungs. These bacteria can remain within the lungs, and eventually cause an infection. In addition to respiratory infections, bad oral hygiene can lead to pneumonia and bronchitis as well; these are serious and painful conditions (Yamada, Yurikusa, Furukawa, Tsubosa, Niihara, Mori, et al, 2019).

vi. Reduced Risk of Alzheimer's

Alzheimer's disease is a progressive disorder involving loss of mental functions resulting from brain tissue changes. When the gums are neglected, they can become inflamed, and when this inflammation occurs, chemicals can be released from the gums and can travel to the brain. Faced with prolonged exposure to these chemicals, certain parts of the brain can start to deteriorate, and over time,

this may result in memory loss. While brushing and flossing will not entirely eliminate the onset of dementia or Alzheimer disease, they will help to prevent it.

vii. **Reduced Risk of Infertility**

According to Chidambar, Shankar, Agarwal, Bhushan and Gururaj (2019), there is a conceivable relationship between male infertility, decreased semen quality, and periodontal diseases in men. As such, periodontitis may subsequently play a role in male infertility (Práger, Pásztor, Várnagy, Kozinszky, Baráth, Gorzó, & Radnai, 2017). Furthermore, some features of poor periodontal status, such as gingival bleeding in the history, presence of calculus and bleeding on probing, were associated with oligo+asthenozoospermia (reduced sperm motility) in men with idiopathic infertility (Práger, Pásztor, Várnagy, Kozinszky, Baráth, Gorzó, et al, 2017). In females, there is an association between polycystic ovary syndrome; which is a hormonal disorder of women and is the leading cause of infertility with oral microbiota (Akcalı, Bostanci, Özçaka, Öztürk-Ceyhan, Gümüş, Buduneli & Belibasakis, 2014).

Healthy Ways to Promote Good Oral Health

Oral health means more than healthy teeth, oral health also connote being free of diseases and conditions that affect all oral, dental and craniofacial tissues, collectively called as the craniofacial complex or the oral cavity. Consequently, the burden of oral diseases and other NCDs could be diminished through public health interventions by addressing common oral health risk factors (WHO, 2018). In respect to this, the following are some of the viable lifestyle modifications to ensure a positive and good oral health status.

1. **Reducing Sugar Consumption:** Since dietary free sugars have been linked to the occurrence of tooth decay and some other oral health problems due to the presence of bacteria in the buccal cavity, hence the need for caution in consumption of sugar in various forms it may appear.
2. **Abstinence to Smoking:** Age long, tobacco smoking has been associated with mouth odour, cancer of the tongue and mouth, poor healing of mouth ulcers and respiratory diseases. It is therefore expedient to abstain from or participate in appropriate intervention programme against tobacco smoking.
3. **Alcohol Consumption:** Like tobacco smoking, alcohol consumption has always been associated with oral health problems, cancer, diabetes and some others non communicable diseases. Therefore, there is no gainsaying that great reduction or abstaining from alcohol consumption will guarantee better oral health status
4. **Avoiding Self Medication:** Self medications for example, some antibiotics could lead to internal staining of teeth, for instance doxycycline (tetracycline) is contraindicated in pregnant or lactating women as well as

in young children due to the risk of possible effects on fetus bone formation and permanent tooth staining depending on the age at which one takes them (Wormser, Wormser, Strle, Myers & Cunha, 2019). Also, there are many medications like prescribed or over-the-counter medicines that may dry up saliva in the mouth which when used continuously tend to compromise the mouth to be prone to varying oral health problems like bad breath and tooth decay.

5. **Healthy Eating:** To prevent the prevalence of periodontal diseases, as well as tooth loss, fruits and vegetables rich in vitamins and minerals are important to prevent oral problems as well as promotion of healthy and strong teeth.
6. **Regular Dentist Visitations:** It is important to visit dentists at least twice a year for dental checkups and cleaning. When one access the health care on time for treatment of mouth injuries, tooth decay and other oral problems, positive oral health would be preserved and promoted.

Conclusions

The level of importance and attention devoted for the care of the teeth and gums have significant effects on the overall health, and it is important that this is not neglected no matter the challenges as if not properly care for, may open the door to all sorts of health problems, including some diseases for example oral cancer, diabetes, lung diseases, Alzheimer, dementia, and many others. Therefore, good oral health is imperative for a healthier body and mind because it diminishes the risk of numerous bacterial borne diseases and also boosts individual's confidence. It is however necessary to understand the importance of good oral hygiene and the implementation of a proper oral care routine right from childhood are imperative as well.

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