

Dental Hygiene is Best Prevention of Dental Diseases

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Abstract

Dental hygiene is the best prevention against caries and other dental diseases, and it is best to adopt healthy habits from an early age. Dental professionals advise that we should brush our teeth at least twice a day: in the morning and before bedtime, while some say it is advisable to brush after each meal. The best prevention of dental and gum disease is adequate dental hygiene, which also involves regular visits to the dentist - an average of two to four times a year, or even more frequently if some specific diseases are involved.

Keywords: *Promotion; Education; Fear; Prevention*

Introduction

Public health professionals who stay energized by new challenges that arise on a daily basis may also be frustrated by ongoing budget fluctuations and bureaucratic processes that appear to be inflexible and outdated [1]. One day may be highlighted by a successful fluoridation campaign and the next by a request to cut 20% from the oral health program budget due to an overall budget deficit. Dental public health professionals face an environment, therefore, in which they need to be flexible, proactive, up-to-date, creative, and compassionate. Those who succeed have learned the importance of maintaining a sense of balance-between a career and personal/family interests, idealism and reality, personal integrity and compromise, and innovation and patience.

Although oral health problems affect everyone, certain population subgroups, defined by demographic factors such as age, sex, race or ethnicity, socioeconomic status, primary language, geography, medical or disability status, and behavioral lifestyles, experience higher levels of oral disease. They are said to have oral health disparities in comparison with other groups. Non-Hispanic Blacks, Hispanics, American Indians, and Alaska Natives generally have the poorest oral health of the racial and ethnic groups in the United States. Limited knowledge of and access to preventive oral health measures and professional care have contributed to these disparities.

Policy

Population age, location, and oral health status have an influence on the design of an oral health care system [1]. For instance, whether the country has more elderly or more children might determine the location of care. Elderly care might be more effective if provided in a nursing home, whereas many countries provide care for children in school clinics. If a large portion of the population lives in rural areas, it may be necessary to deliver care from mobile clinics or use alternative providers. If children in a particular country have a high caries rate and financial resources are limited, the focus of the system might necessarily be on restoring the teeth, whereas if the caries rate was lower, the focus might be on prevention.

Health policy of each country is formulated by politicians using data on oral health needs of their particular population. The policy reflects the health values and beliefs of the culture. Goals and objectives for actions are identified and are facilitated or restrained by available financial support.

Promotion

Health promotion is the science and art of helping people and society change their lifestyles to attain optimal health [1]. It places an emphasis on improving quantity and quality of life for all and enables people to improve their health. Health promotion includes the use of any preventive, educational, administrative policy, program, or law to achieve this outcome. Oral health promotion is aimed at four preventable oral diseases: dental caries, disease of the supporting structures, oral pharyngeal cancers and craniofacial injuries. The poor, minorities, and the elderly share a disproportionate amount of preventable oral disease. Prevention is vital to health promotion. The goal of any oral health program should be to empower people to attain equity in health and to reduce the incidence and prevalence of oral disease through education and interventions.

The World Health Organization (WHO) defines health promotion as “the process of enabling people to increase control over and to improve their health.” WHO continues to state, “Health promotion goes beyond health care. It puts health on the agenda of policy makers in all sectors and at all levels, directing them to be aware of the health consequences of their decisions and to accept their responsibilities for health. Health promotion policy combines diverse but complementary approaches including legislation, fiscal measures, taxation, and organizational change. It is a coordinated effort toward creating supportive environments and strengthening community action. Health promotion works through concrete and effective community actions in setting priorities, and making decisions. It incorporates the four pieces of the puzzle in the dental hygiene care plan: assessing, planning, implementing and evaluating strategies to achieve better health. Community development and empowerment draws on existing human and material resources in the community to facilitate self-help, social support, participation and ownership”. Although individual health promotion focuses on the health of one individual at a time, community health promotion has the much broader purpose of promoting health in societies as a whole.

Dental health care needs are sensitive to many psycho-social influences such as socio-economic status, previous experiences, level of education obtained, knowledge, attitudes, fears, expectations, satisfaction and so forth [2]. Consequently, dental health goals will be different for individuals within the same population, for people from different geographic locations and different ethnic groups. Considering that patients and dentists may differ in one, some or all of these psycho-social/cultural influences, it is of little surprise that misperceptions exist between lay and professional perceptions of dental health care needs. Therefore, although the dentist can clinically define the patient’s treatment needs this might not reflect the patients’ true wants, needs or wishes. The dentist may have one perception while the patient has another. Problems occur for the treatment alliance when these two perceptions of need are at odds with one another. The degree to which the dentist and patient agreed or disagreed, in this regard, has been shown to influence the treatment alliance.

Education

Oral health education is a planned package of information, learning activities, or experiences intended to produce improved oral health [1]. Its primary goal is disease prevention. Its purpose is to facilitate decision making for oral health practices and encourage appropriate choices in preventive health behaviors. Oral health education has advanced from a traditional, cognitive approach that merely provides health facts to one of incorporating various models of sociology, psychology, learning styles and methods that better support learning and behavior change.

All health education activities do not produce positive changes in oral health behaviors. Research has shown that simply dispensing information regarding ways to improve oral health, as in the traditional cognitive approach, is ineffective for producing changes in oral health behaviors. To be successful, an oral health education plan must assess and accommodate the knowledge levels and needs of the

intended audience. It should be tailored to incorporate their cultural norms, values, beliefs, attitudes, opinions and environment. An educational plan should be modified and adjusted as needed to ensure that it is appropriate for the audience.

The objective of dental health education is to influence the attitude and behaviour of the individual to maintain oral health for life and prevent oral disease [3]:

- Primary prevention-seeks to prevent the initial occurrence of a disease or disorder and is aimed at healthy individuals.
- Secondary prevention-aims to arrest disease through early detection and Rx.
- Tertiary prevention-helps individuals to deal with the effects of the disease and to prevent further recurrence.

The way in which the advice is imparted is as important as its content. there are three main routes:

- The mass media: This is an expensive alternative and, whilst commercial advertisers tempt the consumer, the success of a dental health education message which is exhorting the public to stop doing something they find pleasurable is not guaranteed.
- Community programmes: These need to be carefully planned, targeted, and monitored.
- One-to-one in the clinical environment: This is usually the most successful approach, because the message can be tailored to the individual and reinforcement is facilitated. However, it is expensive in terms of manpower.

Saliva

The public and health professionals' image of saliva has changed drastically in recent years because of abundant information about the role of saliva in health and disease that is made available for public consumption via the Internet and the media [4]. In the view of most people, saliva was created for licking envelopes and stamps. People rarely paid attention to saliva unless they were nervous, developed dry mouth, and had to deliver a public speech. Indeed, dry mouth caused by anxiety was used as a diagnostic aid by ancient societies in a lie detector test known as the rice test. An accused was given a mouthful of dry rice to chew and swallow. If the accused was anxious because of guilt, the emotional inhibition of salivation resulting from increasing activity of the sympathetic nervous system would have interfered with adequate bolus formation and swallowing; it was interpreted as proof of wrongdoing and resulted in beheading of the accused. What used to be described as 99% water today is viewed as a fountain of information that reflects an individual's state of health and disease. The quality and quantity of saliva, like urine and blood, are affected by a variety of medical conditions and medications, as well as the psychological status of the patient. The public and professionals are used to blood and urine tests but not a saliva test as a routine practice for risk assessment and disease prevention. Although a saliva test is less invasive than a blood test, and needs less privacy than a urine test, it has not been part of the everyday practice of medicine and dentistry in the past. However, saliva diagnostic tests are becoming more readily available to and utilized by healthcare providers in recent years.

Saliva is produced by three pairs of major glands and numerous minor salivary glands within the oral cavity. The parotid, submandibular, and sublingual salivary glands contribute to 90% of total saliva secretions. Minor salivary glands contribute to the remaining 10%. The saliva secreted by the major and minor glands collectively is referred to as whole saliva. In the resting (unstimulated) state, approximately two-thirds of the volume of whole saliva is produced by submandibular glands. Upon stimulation, the parotid glands account for at least 50% of whole saliva volume in the mouth. Sublingual glands contribute to a small percentage of unstimulated and stimulated whole saliva. Minor salivary glands contribute significantly to the lubrication of the oral mucosa because they contain a large amount of proteins.

Saliva contains three buffer systems (bicarbonate, phosphate, and protein) and helps to maintain an acceptable pH in the range of 6.0 - 7.5 within the oral cavity. When a substance is placed in the oral cavity, the saliva flow will increase based on its taste, consistency, and concentration. When the volume of saliva is about 1.1 mL, the urge for swallowing will occur. The salivary stimulation, dilution of tastant, and swallowing will go on until the concentration of the tastants reaches a point where it no longer stimulates the flow rate. The oral clearance of different substances will be prolonged in the absence of saliva, leading to potential harm to intraoral hard and soft tissues.

Saliva is supersaturated with respect to calcium hydroxyapatite under normal physiologic conditions, which prevents demineralization of the dentition. The salivary protein pellicle further protects teeth against irritants.

Fear

Dental treatment is a potentially stressful experience for many, even most patients [5]. Physical (e.g. potential for pain, being closed-in) and environmental/psychological factors (e.g. lack of predictability, loss of control) make the dental situation unique and often invoke stress. Undoubtedly, some procedures are especially stressful for a great majority of patients. For example, in patients generally (i.e. not necessarily those who are highly fearful/anxious), root canal therapy and the associated pain and stress results in transitional changes in natural killer cell cytotoxicity and the subsequent development of infectious disease episodes within the following month.

Patients experience fear or anxiety not only during invasive procedures; in fact, patients also report experiencing fear and/or anxiety in the context of routine preventative procedures, including dental hygiene treatment. Many aspects of dental treatment are perceived as uncomfortable, threatening, or disgusting by patients, including the sights, sounds, and smells associated with the dental clinic, injections, dental instruments, perceived lack of control and predictability, and dental/orofacial pain. Moreover, patients often feel embarrassment in regard to their anxious and fearful responses anticipating, or while receiving, dental care.

In general, patients fear aspects of professional oral health care, with a few having anxiety or fear about self-care (e.g. toothbrushing). Evocative aspects of dental care are specific dental stimuli and experiences, such as being supine in the dental chair; pain, anticipation of pain, or memory of pain; sight and sound of the drill; and receiving injections, along with environmental factors, such as the lack of predictability and control, inability to easily “escape” or leave the dental setting, and (largely perceived) potential for infection.

Though dental patients may report both fear and anxiety about dental treatment, it is important to note that the two are phenomena that indeed are distinct from one another, although there likely is some overlap between them. This distinction between dental care-related fears and anxieties is one in need of further clarification and investigation. Many of the titles of current dental fear and anxiety instruments, as well as those evaluating fears and anxieties about pain, are misnomers, in that they purport to assess anxiety or fear, but in reality likely reflect some combination of both states.

Prevention

Prevention of disease must be the foundation of all healthcare provision [6]. To avoid invasive treatment, whether it is cardiac surgery or the provision of dental restorations, must be the goal of all healthcare practitioners. Oral health is essential to overall health and well-being and profoundly influences the quality of life, including speaking, eating and self esteem, and has the possibility to disrupt our ability to learn and work.

Oral diseases, particularly dental caries and periodontal disease affecting both children and adults. Most oral health problems are preventable. Oral health is not solely dependent on individual behaviours. Much can be done to reduce oral diseases by using a variety of approaches that include community-based initiatives, self-care and professional care. There is also much that governments and other authorities can do to ensure that oral health continues to improve. Government develops policies to provide targets and strategies for the promotion of oral health.

Prevention can be defined as preventing either the onset or the progress of a disease or restoring function lost due to disease. Prevention can be divided up according to the stages of disease prevention and can be categorised into primary, secondary and tertiary prevention. However, not all disease prevention strategies fall into a single category of primary, secondary or tertiary prevention, e.g. dietary advice could fall into either primary prevention to prevent dental caries from occurring in the first place, or secondary prevention to prevent dental caries that has already occurred in one or more teeth from progressing further.

Safety

Patients have a reasonable expectation that the care they receive and the environment it is performed in are safe [7]. All those working within a dental practice should also expect a level of safety in the workplace. It can be reasonably argued that dental healthcare workers may have a higher risk of acquired infection in the workplace based on their increased exposure to this environment rather than patients whose exposure is considerably less.

Dentists and other dental healthcare workers have professional, ethical and legal obligations they must meet. In addition to this, business owners will have further obligations to their staff, patients who attend their practice and the public. If any dental healthcare worker has concerns about the infection control standards in their workplace, they should raise them. This may be, in the first instance, by raising concerns with the person responsible for setting the standards within the practice. If this approach fails to result in an appropriate response within a reasonable timeframe, then it may be necessary to raise concerns with, for example, local or national regulators of infection control or professional standards. Whilst this may seem to be a rather drastic step, it is not sustainable to ignore issues that may adversely impact upon the general health and wellbeing of those people that may encounter an unsafe environment.

Conclusion

Leading a healthy life, along with regular dental hygiene, is a key factor for a beautiful smile. Leading a healthy life involves, among other things, eating healthy. Foods consumed can prevent (or accelerate) tooth decay. Healthy eating includes foods from all food groups including fruits and vegetables, starch-rich foods (rice, pasta, bread and potatoes), protein-rich foods (fish, meat, eggs) and milk products.

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