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ORAL HEALTH STATUS AND PRACTICES AMONG ELDERLY IN COMMUNITY: THE ROLE OF PUBLIC HEALTH NURSES IN PREVENTIVE AND ORAL HEALTH PROMOTION

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Abstract

Oral health is vital part of the overall health of the individuals. Oral health has an extensive affect in quality of life particularly in old age peoples. Comorbidities, age related changes and social factors are the main causes of the dental caries and other periodontal diseases e.g. tooth loss, infections and dysphagia in old age peoples. Apart from that elderly peoples also have limited access to preventive health care in public health settings. Public health nursing (PHNs) plays a vital role prevention and promotion of oral health in the community especially old age peoples. Public health nurse can play role in prevention and oral health promotion through different strategies including assessment of health status, health education, advocacy, and community campaigns. This paper describes present health status of the oral cavity and practices at community level in the old age peoples. It also synthesize an evidence based background for public health nurses that how public health nurses can play their role in prevention and promotion of oral health at community level particularly in old age peoples. This paper also recommend quality staff training, standard tools for oral health assessment, collaboration with other health care professionals, preventive programs at community level, advocacy and legislation to enhance quality of prevention and promotion of oral health in old age individuals at community level.

INTRODUCTION

Oral health is an essential and mostly ignored part of the overall health, especially in old age people who face exceptional barriers to oral health. The basic aim of this paper to assess oral health status and practices among elderly individuals in Peshawar, Khyber Pakhtunkhwa, and to know related risk factors, like way of life habits, availability of healthcare, and psycho-social factors. Oral health is a vital element of overall health status and oral health plays an important role in the quality of our daily life, self-respect, and overall health status. There are two most common diseases that significantly affects our total population are dental caries and periodontal disease. These diseases does not only disturb our oral physiology but it also have extensive consequences on overall health status and socio-economic factors.[(1)] A

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study conducted in Karachi and the result showed that oral health status worsens in old age. Old age people living in homes are more prone to diseases as compared to young adults to devastating situation and hence elder people need more extensive care to prevent from different diseases.[2]

Dental caries:

Dental caries, which is also called tooth decay. It is a disease which is caused by many factors characterized by local demolition of dental hard tissues. Dental caries is one of the most common long-lasting diseases worldwide, which affects both young and older age individuals and socioeconomic status. According to a cross-sectional study investigation the effect of nutrition on dental caries occurrence among adults, the disease remains a main burden on efforts of public health. Many studies showed that taking high sugar diet, poor oral hygiene, and inadequate access to fluoride-based interventions are the vital contributors to development of dental caries and its progression.[3]

Periodontal Disease:

Periodontal disease is the combination of different inflammatory conditions which affects the gingiva, periodontal ligament, cementum, and alveolar bone.[4] This double conceptualization shows the progression of disease which starts from the margins of the gingiva and progress to the more deep auxiliary structures. However, organization methods have changed from time to time to responsible for clinical distinctions, bacterial shapes, and different factors of the host.[5] Researchers conducted different studies in the previous decades has emphasized that periodontal disease are caused by many factors, associating plaque, immunity status of the host, genetic, and many systemic and behavioral factors.[6]

Gingivitis:

It is an inflammation limited to the gingiva of the oral cavity. major signs of gingivitis are redness, swelling, and bleeding on physical examination, but there is damage to attachment or bone.[5] Gingivitis mostly occurs due plaque biofilms which combines alongside of the gingival border, due to hormonal imbalance, some medicines, and also due to systemic disorders which can contribute to or worsen inflammation of the gingiva. It is considered a reversible disease with operational removal of plaque and better oral hygiene of oral cavity. There will be no everlasting harm to the auxiliary periodontal tool occurs if addressed on time.[1]

Periodontitis:

It is the extension of inflammation into the deeper auxiliary tissues of the tooth of the oral cavity, which cause the advanced damage to the alveolar bone and also to attached connective tissue. this shows as pocket formation, recession, mobility of the tooth, and possibly tooth damage as well.[7]

Necrotizing Periodontal Diseases:

Necrotizing periodontal disease is the necrosis of the gingival tissues, papillae including periodontal ligaments. It also includes necrotizing ulcerative gingivitis (NUG) and necrotizing ulcerative periodontitis (NUP).[8] it is primarily detected in immune-compromised peoples, e.g. individuals with severe malnutrition or uncontrolled HIV, though stress and poor oral hygiene also play an important roles.[9]

Risk Factors:

There are many risk factors including lack of oral hygiene play crucial roles in the beginning and development of some periodontal disease. In which the bacterial plaque biofilm is the main causative agent, all individuals does not have same response to the same infective agent. Some of the common risk factors are mentioned below.

Smoking and Tobacco Use:

Smoking and use of tobacco are the main causes of dangerous forms of periodontal disease and inadequate treatment results. Use of tobacco damage vascularization in the gingival tissues, weakens immune response of the individual, and it also helps in the colonization of bacterial microorganism.[10]

Systemic Conditions:

Uncontrolled diabetes mellitus is the main risk factor which can aggravate periodontal damage, predominantly due to decreased wound healing and immunological changes. Rising evidence in research links obesity and metabolic syndrome with

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periodontal inflammation due to pro-inflammatory mediators in body systems.[10]

Genetic Susceptibility:

Multiform in genes manipulating the production of cytokine and the response of immunity can increase disease susceptibility. Family history can also aggregate and predispose to periodontal disease due to inheritance.

Age:

Older age people are considered more prone to periodontitis, increase in age may also be a substitute for the combination of effects e.g. plaque formation, lifestyle changes, and systemic situations.[10]

Oral Hygiene Habits:

Inadequate tooth brushing and oral hygiene practice can significantly increase plaque formation, stimulating inflammation of the gingiva and may progress periodontitis.[11]

Stress, Nutrition, and Lifestyle:

Improper nutrition and prolonged stress can alter immune response of individuals, hence it increase the predisposition of periodontal disease. Increase sugar intake and decrease micronutrients intake can greatly effect both biofilm configuration and individual response. To identify these factors, practitioners can systematically organize patients to offer specific preventive and therapeutic therapy. Changing life style and considering primary systemic issue is crucial for maintainable periodontal health of individuals.[10]

Diabetes Mellitus:

Diabetes mellitus is strongly associated with periodontal inflammation is strongly recognized. Long lasting increase blood sugar worsen periodontal healing process, and likewise periodontal infection can also aggravate blood sugar. Prompt treatment of Periodontal diseases results in improve hyperglycemia of the individuals, it shows that integrated care for diabetic patients is very important.[10]

Prevention Strategies:

Good preventive measure for periodontitis can enhance both bacteriological control mechanism as well as risk factor for management of periodontal disease, applying multiple approaches which integrate both clinical measures with patient teaching and larger community health interventions.[12]

Core preventive approaches:

1. Control of Plaque and Professional Care:

Oral Hygiene: Regular tooth brushing, cleaning the tongue, and interspaces of the teeth, prevent the formation of pathogenic biofilm.

Debridement: Scaling of the teeth consistently, root planing, and pre disease follow ups can eradicate calculus formation and prevent biofilms formation of the sub gingiva, vital strategies in preventing inflammation of the gingiva of oral cavity.

2. Alternative Therapies:

Antiseptic mouth washes: Different mouth solutions which reduce microbial load is helpful for predisposed and dexterity issues with patients.

Therapies for host modification: different antibiotics e.g. doxycycline and anti-inflammatory medicines NSAIDs have been determined to modulate the inflammatory response of the host and also decreasing damage of tissues.[10] Local Antimicrobial Therapies: Different antimicrobial which is used locally to the oral cavity have also shown to decrease bacterial load.[12]

3. Modification of Lifestyle:

Cessation of tobacco Smoking: Counseling of individuals at risk, replacement therapies e.g. replacement of tobacco with nicotine, and psychological support are essential lifestyle modification for individuals with smoking, the tobacco use is strongly associated with periodontal diseases. Nutrition: different diets which contains vitamins, minerals, and antioxidants helps inflammation reduction and periodontal tissue restoration. Stress reduction: High stress can decrease immunity, oral hygiene habits, and psychological support can ultimately reduce the progression of periodontal diseases. [8]

4. Monitoring and prompt treatment:

Regular checkup oral cavity which include detail examination, clinical attachments, and probing the bleeding can helps early detection and hence treatment. Regular checkups can be more helpful for

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Individuals with different comorbidities or predisposed to periodontal disease.[10]

Individuals at Risks:

Old age peoples are at risk which makes them more susceptible to different dental caries periodontal diseases. Delaying treatment of elder people leads to predisposed them periodontal diseases and early gingivitis. Different factors e.g. smoking, substance abuse and stress can aggravate the inflammation of the gingiva and dental caries.[13]

Economic Factor:

Economy a vital component that can affect significantly on receiving appropriate treatment for periodontal diseases and make a barrier for marginalized individuals especially in old age peoples. Therefore preventive care e.g. filling, cleaning, and other procedures and management becomes out of reach of such individuals. [14] Consequently financial factors have compounding effect which increase the incidence of untreated dental caries and progressed oral cavity diseases particularly in elderly individuals.

Education:

Illiterate people does not have enough knowledge about periodontal diseases and preventive strategies e.g. teeth brushing and use of fluoride, hence the individual have no education are more predisposed to dental caries and periodontal conditions.[15]

Access to Healthcare:

Health care access remains a vital component in prevention and treatment of periodontal diseases. Consequently, routine check-ups and preventive care will be reduced and the individuals will be more susceptible to periodontal diseases. These patterns of delayed access to health care lead to an increased likelihood of microorganism, dental caries, and periodontal inflammation which requires more invasive and expensive interventions.[16]

The Role of Public Health Nurses in Preventive Oral Health Promotion:

While more dependent persons may require support and active assistance to maintain good oral hygiene, some older people may only need encouragement and reminders. By encouraging proper diet and oral cleanliness, minimizing discomfort, and early detection of dental disorders, nursing teams and other health professionals play a critical role in promoting oral health.[17] Nurses need relevant education, organizational support, adequate resources and support from a multidisciplinary team to deliver optimal oral health promotion.[18] Nurses in particular are capable of early provision of key primary preventive oral services as well as keeping the momentum going for maintaining their delivery. Nurses played a pivotal role in all the programs yet the structure of the delivery team varied. Interventions were implemented either entirely by nursing staff or in partnership with other non-dental personnel such as pediatricians, nutritionists or vaccination staff. [19] PHNs can offer specialized instruction on oral hygiene practices appropriate for senior citizens, such as using electric toothbrushes, modifying brushing methods, and interdental cleaning options when dexterity is restricted. Denture upkeep and care, Handling dry mouth (saliva stimulants, hydration, and medication review with prescribers), Nutrition counseling to promote oral health (avoiding sweets and promoting nutrient-dense, texture-appropriate foods), identifying oral cancer symptoms, and knowing when to seek an urgent dental examination. PHNs can use culturally relevant materials and basic visual aids in their individual (home visits, clinic consultations) or group-based (senior centers, community workshops) educational interventions.[20]

CONCLUSION:

A neglected yet crucial component of healthy aging is oral health. Through assessment, education, care coordination, community programming, and advocacy, public health nurses have a special and underutilized opportunity to support preventative oral health among older persons who live in the community. Increasing the ability of public health nurses, fostering inter-professional partnerships, and coordinating funding and policy to promote preventative initiatives will greatly lower inequities in oral health and enhance the general well-being of the senior population.

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