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Dental Decay Dilemma: Addressing Caries in Pakistan's Population

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How to cite this Article:
Kashif M, Tanwir F, Ashar A. Dental Decay Dilemma: Addressing Caries in Pakistan's Population. J Bahria Uni Med Dental Coll. 2024;14(4):225-6 DOI: https://doi.org/10.51985/JBUMDC2024359

Maintaining good oral health is essential for general well-being since it affects a person's comfort level when speaking, eating, and interacting with others. It affects systemic health as well as the condition of the teeth, gums, and oral tissues. Maintaining good oral hygiene reduces the risk of systemic illnesses like diabetes and cardiovascular disease in addition to common dental problems like cavities and gum disease.[1]

Moreover, dental health has a substantial impact on one's quality of life, influencing both mental and self-worth. Therefore, prioritizing dental health first is essential to reaching the highest level of wellness and health.[2] Oral diseases are considered serious public health issues, due to their high incidence and prevalence around the world.[3] Among those oral disease, dental caries is still a significant issue for practically every nation on the globe, according to the World Health Organization (WHO).[4] Dental caries is the deterioration of teeth caused by acids formed by bacteria also known as tooth decay.[5] Dental cavities are known to have a negative impact on health. Painful and even debilitating functional limitations can result from untreated carious lesions.[6]

There have only been few publications in the last three years regarding the occurrence of dental caries in Pakistani population. Dental caries is still a common oral health problem in Pakistan, accounting for a large portion of the country's oral disease burden. In a study published in 2021, researcher discovered that dental caries was remarkably common among Pakistani schools, with a sizable percentage of students suffering from untreated caries.[7] The high frequency of dental caries in the nation is caused by a number of factors, including intake of sugary foods and beverages, inadequate access to dental care services, and poor oral hygiene habits. An analysis found that dental caries was estimated to be prevalent at 56.62% nationwide. The estimate for the prevalence of dental caries was 55.45% in Punjab, 58.96% in Sindh, and 51.18% in Baluchistan and KPK united. The estimate of tooth decay prevalence in large cities as in Karachi was 61.98%, in Lahore 57.64%, whereas in Rawalpindi and Islamabad collectively was 57.37%. In primary dentition the prevalence figures was 50.44% and in mixed dentition, it was 61.14% whilst in the permanent dentition the prevalence estimate was 57.15%.[8]

Reaching the best possible oral health depends on controlling dental caries, it is essential to first comprehend the prevalence and advancement of dental caries in order to address this issue at the community level. Unfortunately, accurate data about dental caries occurrence at the national or regional level is still elusive in many developing countries, including Pakistan. To elaborate, it is imperative to recognize that dental caries constitute a substantial threat to public health, negatively affecting people's quality of life and taxing healthcare resources. Without thorough understanding of its incidence and patterns, it becomes difficult to develop focused interventions and allocate resources efficiently.

Maintaining good oral health requires preventing dental caries. Good dental hygiene practices, such as using fluoride mouthwash, flossing often, and brushing teeth twice a day with fluoride toothpaste, are effective techniques.[9] In addition, using fluoridated water, eating a balanced diet high in fruits and vegetables, and minimizing sugary food and drinks intake all help prevent cavities. Early caries detection and treatment depend on routine dental examinations and skilled cleanings. Dental sealants and community water fluoridation are two more effective preventive strategies. In general, the key to preventing caries is a holistic strategy that combines personal oral hygiene habits with community-wide initiatives.[10]

It is imperative to report dental caries, also referred to as cavities or tooth decay, for a number of reasons:

Reporting dental caries allows for early detection of the condition. Early cavity detection allows for prompt intervention, which stops future development and possible consequences.

By reporting dental caries, medical personnel are able to determine who is at risk and take appropriate action. These

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Received: 25-04-2024
Accepted: 21-05-2024
1st Revision 21-05-2024

could include fluoride treatments, diet changes, education about oral hygiene, and dental sealants to stop cavities from forming.

Appropriate treatment plans that are suited to the patient's requirements can be developed with the help of accurate dental caries reporting. Treatment options include dental fillings, root canal treatments, or extraction in extreme situations, depending on the type and degree of the decay.

Dental caries reports are useful for tracking changes in oral health within communities or groups. Planning and implementing preventative programs in public health at the local, regional, and national levels benefit greatly from this data. Information about the prevalence and distribution of dental caries aids in studies intended to identify risk factors, patterns, and causes of the disease. The creation of evidence-based preventative and treatment methods is guided by this information. If dental caries is not treated, it may have an impact not only on oral health but also on the body as a whole. For example, it may result in discomfort, infection, trouble eating, and a lower standard of living.

Dental caries can be reported to lower the chance of related health issues and to enable complete healthcare management.

In order to close this knowledge gap, systematic efforts should be made to carry out surveys and epidemiological studies that document the prevalence and patterns of dental caries among Pakistan's various demographics. Governmental agencies, academic institutions, and dentistry groups working together can make data collection simpler and additionally guarantee that the information is accurate and complete. Furthermore, although on a smaller scale, leveraging the healthcare infrastructure and data sources already in place, such as community health initiatives and medical records, might provide insightful information about the incidence of dental caries. These resources can serve as cornerstones for additional study by providing a foundation for future research, guiding new hypotheses, and offering benchmarks for progress. For policymakers, they offer evidence-based information essential for making informed decisions, designing effective public health strategies, allocating resources efficiently, and developing regulations aimed at reducing the incidence and impact of dental caries, thereby enhancing public health outcomes.

In the meantime, it is imperative to increase public knowledge of the significance of proper oral hygiene, dietary practices, and routine dental examinations. Encouraging people to take preventative actions and seek treatment as soon as possible can help lower the incidence of dental caries and improve oral health in general.

To further reduce the prevalence of dental caries at the local level, it is imperative to extend access to dental care facilities and incorporate oral health into primary healthcare services, especially in underprivileged communities. Pakistan can significantly improve oral health outcomes for its populace and manage dental caries by investing in oral health infrastructure and training healthcare providers to provide basic dental care services.

In a nutshell while there is a dearth of information regarding the prevalence of dental caries, coordinated efforts to gather data, raise public awareness, and develop infrastructure can open the door to efficient dental caries management and eventually help Pakistani communities achieve optimal oral health. To sum up, dental caries must be reported in order to support research, early identification, prevention, treatment planning, trend monitoring, and overall health protection. It is essential for fostering oral health and well-being in both the person and the community.

Authors Contribution:
Mehwash Kashif: Conceptualization and wrote the manuscript
Farzeen Tanwir: Literature search and review
Aman Ashar: Collected the data and wrote the manuscript

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