Review Article

ORAL HEALTH OF RURAL INDIA

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Abstract
Introduction: Health is one of the most valuable assets one can possess. Oral Health is an important aspect of the general health. In developing countries like India, where agriculture is the main occupation. In rural areas due to lack of knowledge about the causes of oral diseases and methods available to prevent them, burden of oral diseases are more.
Materials and method: This review article formulated based on available literature online. A thorough search was made on the Pubmed and other reliable sources and then review is formed.
Conclusion: Due importance is not given to oral health in the policy of national health planning. Hence, there is a need to make people aware of preventive and curative aspects of oral health so that quality of life of people could be improved.
Key words: Oral Health, Rural India, Disparities, Resources

Introduction

Health is one of the most valuable assets one can possess. It is important for every person as an individual and for every country as a whole. Health is defined by the World Health Organization as a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity. In recent years; this statement has been amplified to include the ability to lead a "Socially and economically productive life.[1]

Health is the most common theme in almost all the cultures. Last few decades, there has been reawakening that health is a fundamental human right and worldwide essential goal that it is necessary to full fill the basic human needs and to an improve quality of life.[2]

Rural and urban areas of India differ in many ways, including demography; environment, economy, social structure, and availability of resources. The characteristics differences, significantly affect the structure, capacity, and functioning of the rural health care safety net. Rural populations tend to be older than those in urban areas and these areas suffer from greater levels of poverty and unemployment and lower levels of income and health & oral health problems.

Dentistry is undergoing tremendous change, with significant advances being made in both diagnosis and treatment of the diseases. However, developments such as digital radiography, computer-aided design and manufacture of dental prostheses, and laser therapy are expensive and are not readily available to all patients, especially those living in poverty or rural areas pf India. As the technological aspects of dental practice in developed countries make rapid progress, people in rural areas of developing and underdeveloped countries continue to be deprived of basic oral health care.[3]

In developing countries like India, where agriculture is the main occupation. In rural areas due to lack of knowledge regarding causes of oral disease and methods available to prevent them. In addition, infrastructure and other facilities are inadequate, and overall quality of life is poor. Only 15 – 20% of people in India are able to get dental services through national schemes. The annual per capita public health expenditure in India is no more than Rs.200.8 Thus, reach and quality of public health services have been below desirable standards. 80-85% of people are spending money from their pocket. Due to this fact - Oral health care seeking behaviour is very low in India, people rarely visit to the dentist and that only in the event of pain.[4]

In rural India, the dentist to population ratio can be as high as one dentist for every 250,000 residents, while the ratio is estimated at one dentist to every 10,000 in urban areas. At the same time, 72.2% of the population of India resides in rural areas. Only 2% of dental specialists are trained in community dentistry, the specialization that would typically practice in rural areas (Tandon, 2004). The very low number of dentists in rural areas, a distribution perpetuated by the current landscape of professional oral health training, is a significant barrier to access for rural village residents.[4,12]

Oral Hygiene Practices

Hindu Brahmins and priests, especially in the region of Varanasi (Uttar Pradesh, India) clean their teeth using cherry wood for an hour, facing the rising sun. This may promote oral health if it is done appropriately. Orthodox Jains clean their teeth using fingers and instead of brush. This leads to a negative impact on their oral health. Muslims offer prayer in the form of namaz, five times in a day. During each namaz, as part of the ritual, they use miswack stick, tooth picks and do gum massaging. This may promote the oral health. Use of chewing twigs: The rural folk in Udupi region of Karnataka use the twigs from mango or cashew tree. Neem and Banyan twigs are commonly used in the rural areas of Tamil Nadu, coconut twigs in the rural areas of Kerala. Datun is used in North India. In African countries, twigs from Salvaodora Persicca are used for cleaning the teeth. The twigs offer mechanical

cleaning action and some twigs may have antimicrobial properties.

Causes of Limited or No Access to Dental Health Care

Due to limited access to dental health care can be accounted for on the level of the patient, community, dental provider, and system. Individual knowledge, perceptions regarding oral health care, financial concerns, and cultural preferences can influence patients' pursuit of oral health care. Geographic differences and availability of transportation as well as patient perception of travel obstacles also determine access to dental health services. The ability to pay for dental health services can affect access to care on the level of patient, provider, and system. For dental providers, the reimbursement rate from both public and private insurances is typically lower in rural areas.

The distribution of the dental workforce can be influenced by geographical areas in rural areas, distance between dental practices and rural residents, as well as personal preferences for dental providers.[4,5,6]

Burden of Oral Disease

Dental diseases are very prevalent in India, and this high prevalence has substantial burden on individuals, communities, and the healthcare system. On a personal level, dental caries and periodontal diseases have a significant negative influence on the quality of life in both children and adults. At the youngest ages, the discomfort and difficulties in ingesting food due to untreated dental caries lead to gain weight and impair cognitive development. By crippling the functionality of the oral cavity, dental diseases, combined with limited food variety and accessibility in rural villages, also causes malnutrition in adults, as severe pain due to untreated caries and periodontal disease incapacitates an adult's ability to chew coarse food.[5]

Challenges in Oral Health Programming

Rural areas in India – several challenges to fully meeting this goal exist. There is a relatively less of knowledge about the causes of dental diseases, the detrimental effects of letting dental diseases go untreated, and proper oral hygiene habits in rural areas. This is problem for any oral health intervention because correcting a population-wide knowledge deficit requires a very extensive behavioural health campaign. Because this intervention set out with the goal of addressing oral health on a primary, secondary, and tertiary level, a widespread oral health education campaign would have, in our opinion, been an insufficient use of resources. Thus, the decision was made to focus the oral health promotion component of this intervention plan in schools. However, it is understood that this pathway of health education may not effectively reach the entire catchment population. (Shah, 2005; Bali, et al., 2004).[4,5,8]

Future Direction

A multipronged approach to oral health is needed to address the challenges of rural populations. Rural areas vary greatly in terms of geography (i.e., population density, mountains and water to be navigated, seasonal weather obstacles) and political influences (i.e., state government policies and resources; federal policies regarding associations with HPSAs. IHS, federally qualified health centres).As a result, rural communities need flexibility to develop strategies that meet their specific needs and take advantages of their resources. The Institute of Medicine's Committee on the future of Rural Health Care recommended that rural communities should have the flexibility and assistance needed to adopt quality improvement approaches that have the greatest impact in rural context. This includes financial resources to innovate and evaluate the effectiveness of new programs, as well mechanisms to disseminate this evidence so that proven new approaches can be replicated. One advantage of rural areas is that they offer opportunities for innovation because smaller-sized communities may be able to achieve coordination, collaboration, and decision making with fewer bureaucratic hurdles than in more complex urban settings. Strategies to improve oral health that bundle services and programs to use scarce resources more efficiently make sense for rural communities (e.g., community regulation of school-based snacks and vending could contribute to reducing dental caries and preventing obesity).

Improving oral health in rural India should not be done piecemeal, however limited and sporadic efforts, such as relying on dentist volunteerism to overcome access barriers in underserved areas, are not substitutes for systematic approaches to oral health care. Prevention needs to be at front line of rural oral health care, with systematic approaches that cross health professions and health sectors. Comparative effectiveness research to identify the safest and most effective oral health practices for different rural settings is needed as are assessments similar to those carried out in medicine to better understand the factors that increase the like hood of dentists and other oral health providers practicing in rural areas.[5,8,9]

Discussion

India is the second most populous country of the world and has changing socio-political demographic and morbidity patterns that have been drawing global attention in recent years. Despite several growths orientated policies adopted by the government, the widening economic, regional and gender disparities are posing challenges for the health sectors.

Dental diseases are one of the most common of non-communicable diseases. Though they are rarely life threatening, they do impact the quality of life. Dental problems can cause severe pain, loss of man days & morbidity. Thus, they are an important public health concern. According to the World Health Organization

(WHO), the prevalent oral diseases are dental caries, periodontal diseases & edentulousness.[4]

Ami M Maru, SenaNarendran conducted their study in rural population depicts the prevalence as well as dental treatment needs in rural was quite high; prevalence 87. 8% and more than 60% of the study sample needed restorative treatment at least on one tooth surface. The high level of dental caries in study population is dynamic and could be attributed to factors such as inadequate awareness of oral health, poor oral hygiene practices and consumption of sweetened beverages.[5]

According to *Avinash J, Bhaskar DJ, Anmol Mathur and Khushboo* the prevalence of dental caries was found to be more in urban areas than rural areas. This is probably due to more cariogenic diet and easier access to refined sugars and sugar products among the urban school children. Similar results were found in some studies conducted in African countries.[10]

According *to Saad Ahmed khan et al* [11] ineqalitities in oral health persists worldwide with the mainly affected being the deprived populations. An individual perception of oral health measures the value attached to oral health and likehood to seeking oral care to achieve optimal oral health care status. It has been found that the perceived oral health in poor population is incorrect this may serve as a barrier to achieving their optimal oral health care. High relative risk of oral disease relates to socio-cultural determinants such as poor living conditions, low educational level, and lack of traditional, belief and culture in support of oral health. Many people consider oral sign and symptoms to be less important than general health illness and have false beliefs towards oral treatment. As a result, they may avoid or postponed the needed care, thus exacerbating the problem.

According to *ShobhaTandon* (2004) [12] there is an increase in the number of dental colleges and there also has been an improvement in the dentist to population ratio. There was a marked improvement of dentist: population ratio between the 1980s and 1990s, from 1:80,000 to 1:42,500. At present the dentist to population ratio in India is 1:30,000. But with a significant geographic imbalance among dental colleges, there has been a great variation in the dentist to population ratio in rural and urban areas. At the moment India has one dentist for 10,000 persons in urban areas and about 2.5 lakh persons in rural areas. According to India have 289 dental colleges with around 25,000 graduates each year. Dental manpower though available yet the utilization of oral health care services is low. The reason for the low utilization of health care services being the high cost involved thereby widening the oral health differences across the social economic classes.

According to N.K Ahuja (2011)[4] Dentistry faces serious problems regarding accessibility of its services to all in India. The major missing link is the absence of a primary health care approach. At present, in rural India one dentist is serving 2.5 lakhs of people whereas; the overall ratio of dentists to population in India is 1: 10,000.12 Due to significant geographic imbalance in the distribution of dental colleges, a great variation in the dentist to population ratio in the rural and the urban areas is seen. Reports suggest that there are about more than one million unqualified dental health-care providers, or 'quacks', in India. They have long been blamed for misdiagnosing and mistreating.

Conclusion

India, a developing country where there is a considerable rise in the burden of oral problems like dental caries, periodontal disease and oral cancer which ultimately results in deprived quality of life.[8]

Oral health is not only important for appearance and sense of well-being but also for overall health.[13]

The aim of oral health care is to promote, maintain and improve the oral health and not merely to provide the clinical services. Traditional measures of oral health ignore the perceptions and feelings of person and affect of their oral cavity on them. Therefore, measures of oral health are needed which consider the impact of oral health and disease on everyday life.[14]

The enjoyment of highest attainable level of health is a fundamental right of every human being without discrimination based on race, religion, socio-economic condition. There are several challenges faced in the delivery of oral health care services to rural population such as deficiency of manpower, poor accessibility, affordability and availability. The utilization of health care services depends on health attitudes, social structure, and social demographic factors along with affordability and accessibility and need for the use of services.[8]

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