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An Understanding Of Dental Public Health In India

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ABSTRACT

A significant public health issue, oral illnesses are becoming more prevalent in many low- and middle-income nations. Through preventative and therapeutic treatments, dental public health (DPH) seeks to enhance the general population's oral health. However, due to the DPH staff's inexperience and lack of proficiency, its successes in India are being questioned. Several search engines and electronic databases, including PubMed and MEDLINE, were used in the literature search for the current investigation. The Central and State Governments of India's documents were also taken into consideration. Finally, 28 papers that contain pertinent material were chosen for the current study. The current study focuses on some of the significant DPH-related issues in India, including the importance of oral health, the DPH workforce and curriculum, the employment of DPH staff in primary oral health care, the function of mobile dentistry vans, and DPH research. It was decided that by hiring more public health dentists in the public sector, bolstering DPH education and research, and integrating oral health programs with general health-care programs, more emphasis should be placed on preventative dental health care.

Keywords: Dental public health, dental tourism, mobile dentistry, primary care, research

INTRODUCTION

Oral health has received the least attention in India's health care system over the last few decades. [1] Oral illnesses continue to be a problem for emerging nations like India, particularly among the rural populace. [2] Dental caries and periodontal disorders are the two most prevalent oral diseases in India, with prevalence rates of 50 percent, 52.5%, 61.4%, 79.2%, and 84.7% in children aged 5, 12, 15, 35-44, and 65-74, respectively, and 55.4%, 89.2%, and 79.4% in people aged 12, 35-44, and 65-74, respectively. [3] It is widely established that dental health is linked to a number of systemic diseases, including diabetes, cardiovascular disease, pregnancy, and its effects on quality of life. [4,5] Orofacial discomfort and the loss of sensorimotor abilities hinder social interaction and intimacy, as well as food preferences and the enjoyment of eating. [6] The major goals of public health dentistry are to educate, inspire, and promote oral health in a variety of communities, as well as to comprehend the prevalence and causes of oral disorders. Dental caries and periodontal disease have been the two main issues in dental public health (DPH) research and practice for the past many decades. [7] According to estimates, more than 90% of adults have periodontal disorders, and about 50%

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of school-age children have dental caries. [8] This rise in dental disease prevalence is seen concurrently with the recent, rapid change in nutrition, and may also be one of its effects. [9,10] India is also known as the "oral cancer capital" of the world due to its large consumption of smoked and smokeless tobacco products, both of which are significantly linked to oral neoplasms. [11] Through various health promotion and preventative efforts, the majority of these widely spread oral disorders are mainly preventable and can be decreased. [12]

In India, the setting of DPH initiatives has changed drastically over the last 15 to 20 years. As a result, dentistry programs' scope and content have also evolved. With their expertise in community affairs and understanding of dental issues, public dental health professionals can have a significant impact on the creation of health programs that serve the interests of both the general public and the dental profession. [13] There hasn't been much to say about the accomplishments in India, despite the fact that the speciality has been contributing to the improvement of oral health conditions since its founding in 1969. [1,14]

In order to examine and analyze the current state of public health dentistry in India while taking into account the distributional, employment, and production trends of public health dentists in India, the current study was done. The study also concentrated on the contribution of dental travel to the advancement of public health, the operation of mobile dental van (MDV) programs in various institutions, and the state of DPH research.

METHODS

Data search for the present review was done both electronically as well as manually. Government agencies such as Dental Council of India (DCI) and Ministry of Health and Family Welfare were also consulted to get relevant data. Electronic search was conducted using databases such as PubMed and MEDLINE and articles published in peer-reviewed journals. Web-based search engines such as Google Scholar were also used to extract relevant articles using various keywords and their combinations. We found “dental public health,” “public health programme,” “dental manpower” as relevant keywords and were entered into Medical Subject Headings (MeSH) controlled vocabulary. The terms such as public health, dental, India, and programs were combined with the MeSH terms by Boolean “AND” or “OR” and entered in both PubMed and Google Scholar. The collected documents included original articles, reviews, editorials, guest editorials, letters to editor, interviews, short reports, and short communications. Some data were also obtained by cross-checking the reference lists of the articles accessed. Studies that were not published in English language were excluded from the study. A total of 40 articles were obtained during initial search which was conducted keeping in view the papers published in the last few decades. However, after scrutinizing all data, only 28 relevant articles were included in the final analysis.

Dental Public Health Workforce

The growing worry over the professional personnel is the current trend in public health dentistry. Inequality across states exists among Indian public health dentists, as shown in Table 1. [15] The current figures also demonstrate that there are a total of 5014 openings for postgraduate dental training in India throughout the nine branches. Only 185 (3.68%) of these posts are open for postgraduate study in public health dentistry, the fewest of any branch [16,17],

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despite the fact that there is a greater demand for these professionals in a nation like India where the bulk of the population lives in rural regions. However, there is currently no policy requiring skilled public health dentists to only provide care to rural residents. In a research to determine dental students' thoughts toward choosing public health dentistry as their future profession, it was discovered that 58% of the participants were considering this dental specialty. [18]

Hospitals around the nation are the only places where public health dental programs are found.

Table 1: State-wise distribution of public health dentists in the country

State	Number of dental institutions	Number of available public health dentists
Andhra Pradesh	22	50
Assam	1	0
Bihar	7	5
Daman and Diu	1	1
Chandigarh	1	2
Chhattisgarh	6	3
Delhi	4	6
Goa	1	2
Gujarat	13	13
Haryana	12	25
Himachal Pradesh	5	4
Jammu and Kashmir	3	0
Jharkhand	3	0
Karnataka	45	143
Kerala	23	14
Madhya Pradesh	16	20
Maharashtra	35	28
Orissa	5	7
Pondicherry	3	5
Punjab	16	15
Rajasthan	15	35
Tamil Nadu	29	50
Uttar Pradesh	33	72
Uttaranchal	2	0
West Bengal	5	2
Total	306	296
Outside the institution		117
Total public health dentists		413

[19] This department has solely been utilized to boost enrollment in dental schools in order to meet DCI standards for the minimum number of outpatient departments. It is regarded as a college's advertising agency. Public health dentists now serve as referral sources. These reasons collectively compel people to seek dental care at for-profit facilities. [20]

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Some of the authors are of the opinion that majority of the dental institutions in the country, especially private ones, are being run for monetary gains. [21] The management is not concerned with the health of the community as a whole. Dental checkup and treatment camps in most parts of the country do a little benefit for the community. Therefore, patients' attendance during these camps falls with time as they become aware that only referrals are being made. [21] The government has not properly executed the oral health policy, a change that could have led to improvement in the differences in health status of urban and rural population. [1]

Primary Oral Healthcare

Most notably in low- and middle-income nations like India, universal primary oral healthcare is still lacking in many countries around the world. [22] Most public (government) dental health care facilities are ill-equipped and understaffed, and budgetary allocations do not place oral health as a top priority. Not even 20% of the nation's primary healthcare centers (PHCs) in rural areas have dentists or DPH specialists on staff. As the government struggles to identify CHCs and as half of the CHCs are not operational, the government's objective of placing a public health dentist at every CHC appears to be a pipe dream. [1,23] Public health dentists working at PHCs and CHCs with minimal dental supplies underutilize their skills, talents, and valuable time in several states. Both dental and urgent care should be provided within the CHC.

Improving Oral Health through Mobile Dentistry

Mobile dental clinics were first used in public health dentistry in 1924. [24] They have been effectively utilized to treat dental issues in schools, with patients who are impaired, in rural areas, in businesses, and in the armed forces of numerous nations. They might present a workable solution to the problem of providing oral health care to a sizable underserved population in a resource-constrained developing nation like India. In India, the Department of Public Health Dentistry now uses MDVs for community training and rural posting of dental interns and postgraduates. [25] However, several of the institutions primarily use MDVs for curative rather than preventive treatments. In community programs, employees who lack training or qualifications perform chairside assistant and peon responsibilities. Any outreach campaign should involve postgraduates and the public health dental department's employees actively. Dental camps should also offer preventive procedures like fluoride application and fissure sealants. MDV programs operating in postgraduate universities must address resource and facility issues to increase productivity.

Dental Tourism and Public Health

In its truest sense, "dental tourism" refers to those who leave their hometown to visit another city in order to receive dental care. [26] Dental tourism is gradually becoming more and more prevalent in the Indian dental market. It is possible for dental tourism to advance or impede public health goals. One the one hand, people who cannot afford them or who reside in areas where they are unavailable would have easier access to procedures. On the other side, dental tourism may be reducing the number of providers since they may charge more for out-of-town patients and do operations more profitably. We are unsure of whether this has a positive or bad impact on society because there is currently a paucity of empirical research in this area. There aren't many statistics on dental tourism, but ideally as the industry expands, so will the motivation to conduct more research. [26]

National Tobacco Control Programme

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The Government of India piloted the National Tobacco Control Programme (NTCP) in 2007–2008 to improve the implementation of the tobacco control regulations under COTPA and the policies of tobacco control required under the World Health Organization Framework Convention on Tobacco Control. [27] Out of the 35 states and union territories in the nation, the program is being implemented in 21 of them. 42 districts in all are currently covered by NTCP. Only approximately half (52%) of the 21 states where the NTCP is being implemented have means for monitoring COTPA requirements, according to internal monitoring of COTPA implementation. Only 11 states have collected fines for infractions of laws against smoking in public places, despite the fact that 15 states have developed difficult enforcement mechanisms for smoke-free norms. Similar to section 5, which prohibits tobacco advertisements, sponsorship, and promotion, a steering committee for its implementation has been established in 21 states, although just three of those states have racked up fines for breaking this rule. The enforcement of laws prohibiting the sale of tobacco products to minors and within 100 yards of educational facilities also continues to be mostly ineffective in many states. [27]

On a more upbeat note, the nation has also seen examples of local-level measures for tobacco control, such as tobacco-free towns and schools that have been reported from numerous states. Chandigarh was the first city to be designated as smoke-free in 2007, even prior to the amended smoke-free legislation taking effect. This is a great illustration of how the government and civil society can work together to reduce tobacco use in the nation. In 2010, Sikkim became the first state in the nation to ban smoking. To give incoming medical and dental students the skills they need for tobacco control, particularly tobacco cessation, efforts have been made to integrate tobacco control into the undergraduate curriculum. [28]

Conclusion

The public health system as a whole has not benefited from the dentistry industry's fast growth. Furthermore, there is a significant disparity in the allocation of public health dentists among the several states. This field of study needs to be more broadly applicable and practical. The urgent requirement is for proper dental specialized education to begin at the undergraduate level. To increase awareness of oral health issues, the government and public sector should hire more public health dentists. Although MDV use is essential for treatment camps, preventive interventions should also be prioritized. To educate people about the risks of self-medication, DPH education initiatives should be undertaken as soon as possible. Like in other industrialized nations, the government should combine family welfare programs with oral health initiatives. To make oral health in this country similar to general health, political, social, organizational (both governmental and nonprofit), professional dedication, and support are required.

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