

REVIEW ARTICLE

Comprehensive Approach in Public Health Dentistry toward Complete Oral Health: A Review

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ABSTRACT

Public health dentistry (PHD) stands as the dental conscience of the nation. In India, PHD specialty has been doing its bit in improving the oral health status since its inception in 1969; there has been little to say about the achieving complete oral health for all. The present review study was undertaken to understand and analyze the current scenario of PHD, keeping in view the comprehensive approach toward achieving complete oral health. The different comprehensive approaches in PHD can be implemented effectively, that are as: the oral health promotion should be done in more innovative and effective manner with different areas as dental health advocacy and literacy campaign, national integrated health navigation system, school-based dental clinics and oral health education in school curriculum, dental health emergency helpline and response system, etc.; Also, the public-private partnership for the different health programmes, and broad-based collaboration around the oral health. As the Improvement in health-care delivery system to reach at grass-root level more extensively and reaching the rural areas by frequent rural dental health care programs; and the special dental health care wings for special care people. Therefore, the understanding of basics and complete implementation along with follow-up of all different comprehensive approaches, PHD, will be more significant toward complete oral health care.

Keywords: Community dentistry, Dental public health, Public health dentistry, Public health programmes, Public health.

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BACKGROUND

Health is multidimensional^[1] and is a state of complete physical, mental, and social well-being and not merely an absence of disease or infirmity.^[2] In developing countries like India, the health of people requires real improvement as well as more attention to public health issues,^[3] and over the past few decades, health is gaining less importance in which the oral health is of least attention.^[4] Furthermore, the prevalence of oral diseases is very marked with dental caries and periodontal diseases as the most common oral diseases among all communities.^[5] Hence, the research and practice in public health dentistry (PHD) have been focused on the major problems as dental caries and periodontal disease.^[6] The most of the oral diseases are preventable and can be lessened through different health promotion, education, and preventive measures through comprehensive approach collectively.^[7] The role of PHD is to understand the distribution and determinants of oral diseases and to educate, motivate, and promote oral health in different populations.^[8] The public health dentist with knowledge of dental problems and skill in dealing with other community problems can be an important influence in the development of health programs.^[9] Hence, the present review study was undertaken to understand and analyze the current scenario of PHD, keeping in view the comprehensive approach towards achieving complete oral health.

METHODS

In the present review, the literature search was done both electronically and manually. Initially, the electronic literature search was conducted using different databases such as "PubMed," "MEDLINE," and "EBSCOhost," and relevant articles published in peer-reviewed journals were obtained. Furthermore, web-based search engines as "Google" and "Google Scholar" were also used to find relevant articles using various keywords along with different their combinations. The keywords used such as "Dental public health (DPH)," "PHD," "public health," "public health programs" were relevant. Furthermore, this keywords were put into Medical

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Subject Headings or MeSH-controlled vocabulary. The terms such as public, comprehensive care, health, dental, India, and community were combined with the MeSH terms by the Boolean "AND" or "OR" and then entered in all above databases and search engines. The other relevant information on the topic was also gathered from the dental college library. At last, the collected literature materials consisting of different original articles, reviews, short communications, short reports, editorials, letters to editor, and interviews were documented in the reference file.

Furthermore, some of literatures were gathered by cross-checking the reference lists of the articles obtained. For reading and understanding purpose, only the literature materials that were published in other than English language were excluded from the study. Hence, 30 literature materials were obtained during literature search and which of the all were published in the past few decades. However, after complete reviewing all literature materials, only 25 found relevant, which were included in the final reading, reviewing, and analysis for the present study.

Public Health

Public is stated as of or pertaining to the people of a community, state, or nation,^[10] and Public health defined as the science and art of preventing diseases, prolonging life, and promoting physical and mental efficiency through organized community efforts for sanitation of the environment, the control of communicable infections, the education of the individuals in personal hygiene, the organization of medical and nursing services for the early diagnosis and preventive treatment of disease, and the development of the social machinery to ensure everyone a standard of living adequate for the maintenance of health, so organizing these benefits as to enable every citizen to realize his birthright of health and longevity.^[11-13] Public health concentrated on different aspects extended over time; health promotion along with extensive health services as well as behavioral interventions is essential tools of public health. Hence, at the end of the 20th century, the scope of public health has increased remarkably.^[14] Public health deals with protecting and improving the health of communities by different actions such as preventing infections spread, for example, cholera or communicable diseases such as tuberculosis and preventing injuries due to road traffic accidents, falls, and/or violence. Public health also includes promoting healthy and fit lifestyle such as educating community about the importance of exercise, smoking harmful effect, balanced diet, and oral hygiene significance in daily life.^[11-15] Public health is multidisciplinary and

contains epidemiology, biostatistics, sociology, public health laws and regulations, health behavior and education, public health research, health economics, and public health engineering.^[16]

In India, the alternative medicine contains six systems such as Ayurveda, Yoga, Naturopathy, Unani, Siddha, and Homeopathy; these were utilized since the time of western medicine originated practising in Indian continent. Ayurveda was taught at Taxila and Nalanda, an ancient universities in India between 600 BC and 600 AD. These alternative medicines are supported by the National Rural Health Mission or NRHM in 2005.^[17-20] Furthermore, there is archaeological evidence found at Mohenjodaro and Harappa, and cities now in Pakistan, dated to 4500–3000 BC, show relics of planned cities with drainage, house, and public baths built of baked bricks.^[21] Therefore, these provide the earliest evidence regarding awareness of environmental sanitation in India. However, in the history of public health, there were four distinct phases demarcated as disease control phase (1880–1920), health promotional phase (1920–1960), social engineering phase, and health for all phase (1981–2000).^[22,23]

The overall success in clinical practice is directly related to the number of people in the community who have assurance in the dental practitioner's abilities, and that assurance is not confined to technical dental services but also, for different community affairs like advise on community proposals for health improvements, dental outreach programs, community health programs, etc.^[24] The dental practitioners in solo practice necessary to know about the public health, to properly fulfil their community obligations. Hence, the partnership between public and private resources is the only way that everyone's dental needs can be taken care of.^[25]

DPH

DPH (DPH) also called as PHD is a relatively new specialty subject, wherein the specialists have broad knowledge and skills in public health administration, research methods, prevention and control oral diseases, provision and financing of oral health care, and the study as well as development of resources.^[1] DPH is defined as the science and art of preventing and controlling dental diseases and promoting dental health through organized community efforts; also, it is that form of dental practice which serves the community as a patient rather than the individual. it concerned with the dental education of the public with applied dental research and with the administration of group dental care programs as well as the prevention and control of dental diseases on a community basis.^[26]

In India, the national oral health policy was drafted by Dental Council of India (DCI) in the year of 1985. The national oral health policy recommended the public health dentists to be appointed at primary health centers and community health centers. Master of Dental Surgery (MDS) is a post graduate program offered by the dental college and hospitals in India, with required qualification for the program as Bachelor of Dental Surgery (BDS) which a five year dental education is including one year of compulsory internship. However, the DCI is the regulatory body for BDS and MDS degree courses in India.^[27] PHD specialty has been doing its bit in improving the oral health status since its inception in 1969; there has been little to say about the achieving complete oral health for all.^[4,28]

Comprehensive Dental Care

The comprehensive dental care is defined as the meeting of accumulated dental needs; at the time, a population group is taken into the programs and for detection and correction of new increments of dental diseases on a semi-annual or other periodic basis.^[29] Therefore, in comprehensive care, we not only think in terms of eliminating pain and infection but also in terms of restoration of serviceable tooth to good functional form, replacement of missing teeth, maintenance care for control of early lesion of dental disease, and also preventive and educational measures so that the population may experience a lower prevalence of disease.^[1] Nowadays, comprehensive dental care is considering the best way to achieve the goal of complete oral health.

Comprehensive Approach in PHD

There are some measures of comprehensive approach in PHD which can be implemented effectively and will be achieved the ultimate goals of complete oral health of individual as well as community. The increase in qualitative 'dental research' for primordial prevention based on the population focused; and approval for new research labs, national institutes, research wings in the institute, etc. along with improvement of existing ones. "Oral health promotion" should be done in more innovative and effective manner with different ways as dental health advocacy and literacy campaign, national integrated health navigation system, school-based dental clinics and oral health education in curriculum, and dental health emergency helpline and response system. "Public-private partnership" for different health programs and broad-based collaboration around the oral health.

Improving "Health-care delivery system" to reach at grass root level more comprehensively and reaching rural areas by frequent rural dental programs and

special dental health care wings for special care people. Periodic dental outreaches programs with mobile dental vans. In coming years, low premium comprehensive "dental health insurance" should be developed by the government. The active and important role should be played by public health dentist in different government health schemes and/or policies like national oral health mission. The dental disease prevention and control by strategies and measures is performed through the integrated national disease surveillance program.

Even as the research in the field of dentistry is advancing at mightier speed worldwide and the state of dental research in India is still at the emerging stage even though we have more than 300 dental colleges in India, which are more than any numeral as compared to other developing countries.^[30] However, the representation of India toward DPH research on the international platform is negligible.^[31] A cookbook approach to participatory programs and research will not work as the experience of community differs from one setting to another. Rather, each research collaboration and each level of collaboration from the local to the national and the international must harmonize the differences and similarities among the participating communities.^[32]

PHD workforce is the increasing concern about the professional workforce, and in a country like India where the majority of the population resides in the rural areas, there is a greater need for these specialists. However, at present, there is no policy for trained public health dentists to strictly serve the rural population.^[8]

Primary oral health care, without any boom, is still lacking across many countries across the world primarily in developing countries such as India.^[33] The introduction of mobile dental clinic into dental public health begin back to the year of 1924;^[34] and have been efficiently used to provide dental treatment for school children, disabled patients, rural communities, armed forces, etc. Mobile dental van may attempt a viable preference to accost the issues of oral health care delivery for a large underserved population with deficient resource, and nowadays, mobile dental clinic or van used for the application for community education and rural posting for dental undergraduates and postgraduates of the department of PHD all over India. Therefore, these programs functional in postgraduate institutions have to rectify shortcomings concerning the facilities and workforce to reform the effectiveness.^[35]

The population strategies are the base for all DPH programs such as water fluoridation and dental health education, and these are programs aimed at a whole population, regardless of individual risk, and whose effectiveness is best measured at population level. However, the common between these approaches is the geographic

targeting in which the schools, or school districts, or even whole countries can be recognized as being at high risk. Therefore, if this can be done with easily available data, then there are no administrative costs for distinguishing the targeted areas. The school children, elderly, socially disadvantaged, rural population, etc. communities needs the dental treatment, which if provided at the dental camp or other health care settings will lessen disparities in oral health care among deprived and non-deprived communities, and ultimately reforms overall oral health of the community.^[36]

Nowadays, public health and dental tourism associated treatment are the immerging approaches for availing the required dental health care. Dental tourism means to those individuals who travel from their area of residence to another location to avail dental services. Furthermore, the Indian dental market or tendency is displaying a gradual increasing trend toward the dental tourism. Dental tourism contributes the contingency of both serving and hindering public health causes, but the procedures may get more approachable for those who cannot afford them or who live in an area where they are not available. On the other hand, dental tourism may be limiting the availability of providers as they execute procedures more profitably for out of town visitors, whom they can charge more.^[37]

CONCLUSION

PHD stands as dental conscience of the nation. Many times, the principal role of Public health dentist is thought of as "taking care of the poor." While assuring that, the required dental services should be provide to meet the oral health care of the underserved population, and it should be the key factor of the important functions of assessment, policy development and assurance regarding dental care; this is only a part of the role that public health dentist plays. Unknowingly, this most visible expectation of the profession fails to meet the needs of those who must rely on the dental safety to receive basic dental care. However, the "public" has given the profession the right and the obligation to be the provider of oral health services for all persons, and if we fail to live up to that obligation as a profession, it may well lose the trust of the public and open up the door for others with less knowledge and interest to make decisions affecting the profession and the public. Therefore, the understanding of basics and complete implementation along with follow-up of all above different comprehensive approaches, PHD will be more significant toward complete oral health care and the professionals can only uplift the specialty by the sincere and constructive efforts.

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