



## Dental Education in India: Where are we going?

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### Abstract

Over the course of the last few decades, there has been a significant expansion in the field of dental education in India. It is vital to examine the existing condition of dental education in India, identify the issues that come with it, and predict the future routes that dental education will take in order to meet the growing need for trained dental practitioners. The purpose of this review is to investigate the developments, difficulties, and possible solutions that have been made in order to improve the quality and relevance of dental training in India. The design of the curriculum, the infrastructure, the development of the faculty, research opportunities, and regulatory frameworks are some of the principal topics that are explored.

**Keywords:** Dental Education; Dental Practitioners; Faculty; Regulatory Frameworks

### Abbreviations

DC: Dental Council of India; NDC: National Dental Commission.

### Introduction

India produces a significant number of dental graduates on a yearly basis due to the presence of more than 300 dental colleges that are now active. In spite of this expansion, the dental education system is confronted with a number of issues, such as limited infrastructure, uneven distribution of dental colleges, and a curriculum that may not be fully aligned

with the requirements of modern healthcare. The dental curriculum in India is regulated by the Dental Council of India (DCI). The curriculum encompasses various disciplines, including oral medicine, orthodontics, periodontics, and prosthodontics [1].

The quality of infrastructure in dental colleges varies significantly. While some institutions have state-of-the-art facilities, others struggle with basic infrastructure and equipment. This disparity affects the quality of education and clinical training received by students. Ensuring uniformity in infrastructure and access to modern equipment is crucial for standardizing dental education across the country [2].

The availability of qualified and experienced faculty is a major challenge in Indian dental education. Many colleges face a shortage of faculty, affecting the student-to-teacher ratio and the quality of education. Faculty development programs, continuous professional development, and incentives for dental educators are essential to address this issue [3].

Research is a critical component of dental education, driving innovation and improving clinical practices. However, research opportunities in Indian dental colleges are limited, primarily due to lack of funding, infrastructure, and mentorship. Encouraging research through grants, collaborations, and dedicated research centers can enhance the research output of dental institutions [4].

The DCI plays a pivotal role in regulating dental education in India. While it has established guidelines for curriculum and accreditation, there is a need for regular updates to keep pace with global advancements in dental education and practice. Moreover, stringent enforcement of regulations is necessary to ensure compliance and maintain educational standards [5]. This article provides a critical analysis of the current condition of dental education in India and makes recommendations for ways in which the field can be improved in the future.

### Challenges in Dental Education

Concerns have been raised over the quality of education as a result of the substantial expansion in the number of dental institutions. Although there has been an increase in the number of graduates, the quality of training has been very inconsistent. The difficulty of ensuring that all dental colleges adhere to excellent educational standards is a serious one [6]. There is a disproportionate number of dental professionals due to the fact that the majority of dental colleges are located in urban and suburban locations. There is a shortage of dental care in India's rural areas, which make up a significant portion of the country's population. [7] It is vital to address this difference between urban and rural areas in order to achieve equal healthcare delivery.

With each passing day, the prospect of dentistry graduates being unable to secure employment is becoming an increasingly pressing worry. As a result of the fact that the skills that graduates gain during their training do not correspond to the requirements of contemporary dentistry practice, the graduates' ability to find work is significantly harmed. A correlation exists between boosting employability and enhancing the curriculum to include practical skills and exposure to the most recent technologies [8].

To ensure that they are up to date with the most recent advancements in the field of dentistry, it is imperative

that dentists who are currently in practice participate in continuing dental education. However, there is a limited supply of CDE programs in India, and furthermore, it is difficult to get a hold of them. It is possible to guarantee continuous skill development by developing efficient continuing education programs and making participation in these programs a prerequisite for the renewal of a license [9].

A substantial proportion of dental students face a significant challenge in the form of a significant impediment, which is the high cost of tuition and the limited number of alternatives for funding. There is a possibility that competent individuals could be dissuaded from pursuing a dental degree due to financial constraints. By increasing the number of scholarships and other forms of financial support, it is possible to make dentistry school more accessible to more people [10].

### Discussion

To stay up with the rapid improvements in dental science and technology, it is vital to make consistent changes to the curriculum that is taught at dentistry schools. Students can be better prepared for collaborative healthcare delivery if they receive an education that emphasizes interprofessional education [11]. The creation of simulation labs, the modernization of existing facilities, and the guarantee of access to cutting-edge equipment are all ways to improve clinical training. In order to ensure that all dental colleges adhere to the same infrastructure standards, uniform standards should be set and enforced [12].

It is necessary for faculty members to engage in ongoing professional development in order to keep educational standards at a high level. Enhancing teaching abilities and knowledge can be accomplished through the implementation of faculty exchange programs, workshops, and general training sessions. Incentive programs and public acknowledgment of dental educators have the potential to both recruit and keep exceptional faculty members [13].

The promotion of research inside dental institutions has the potential to stimulate innovation and enhance clinical work practices. Increasing the amount of research that is produced can be accomplished through the provision of research funding, the establishment of dedicated research centers, and the promotion of relationships with national and international institutions. A culture of research may be fostered and talent can be developed through the use of mentoring programs for younger researchers [14].

It is important for the DCI to continually evaluate and update its recommendations so that they are in accordance

with international norms. Compliance may be maintained and educational quality can be preserved through the implementation of stringent laws and the conduct of periodic audits. The implementation of a national accrediting system for dentistry colleges has the potential to result in the standardization of educational standards across the nation [15].

To close the gap that exists between urban and rural communities, it is imperative that efforts be made to build dental colleges and clinics in rural areas. The provision of financial rewards and possibilities for career progression to dental practitioners who work in remote areas can be an effective means of enhancing access to dental services [16].

The employability of graduates can be improved by ensuring that the curriculum is aligned with the requirements of contemporary dentistry practice. It is possible to prepare students for a variety of professional pathways by providing them with opportunities to take classes on practice management, entrepreneurship, and digital dentistry. It is possible for students to gain practical experience and prospects for employment through collaboration with dental clinics and industry representatives [17].

The provision of Continuing Dental Education programs that are easily accessible and widely available can help to ensure that practicing dentists remain current with the most recent innovations in the field. A variety of possibilities for ongoing learning can be found in online continuing education programs, workshops, and conferences. Making continuing education essential for license renewal is one way to guarantee consistent skill improvement [18].

When it comes to tackling inequities in oral health care in India, having a comprehensive understanding of the socio-demographic determinants takes us closer to having a firm grasp on the contextual landscape from which we must work. It is equally important to adopt new strategies to improve the current system. These strategies include updating oral health care policies and making the necessary modifications, ensuring that dentists are adequately represented in decision-making bodies, allocating sufficient funding to establish dental units within PHCs, utilizing cost-effective strategies like using dental auxiliaries in primary healthcare, and embracing more recent technological advancements like teledentistry for remote dental consultations and technology for oral health promotion [19].

The National Dental Commission (NDC) Bill, 2023 has been approved by the Parliament, marking a significant step in improving the quality of health care and bringing dental education in line with international norms. The constant dedication of the government to providing its citizens with

dental care that meets the highest possible standards is highlighted by this revolutionary piece of legislation. The NDC Act 2023 will abolish the Dentists Bill of 1948 and establish the NDC, which will serve as a replacement for the DCI that is now in place. This will result in the introduction of a revolutionary regulatory framework. In order to bring the dental education and profession landscape up to the same level as international standards, the Act proposes a comprehensive renovation of both environments [20].

The goal of dental education and curriculum improvement should be to produce dentists who are not only knowledgeable and skilled in dentistry but also ready to practice. Family dentistry has given way to corporate dentistry, where the majority of newly practicing dentists fall within the middle spectrum. The times have changed. In terms of setting up their practices, marketing their practices in an ethical manner, dealing with medical emergencies, having knowledge of basic and advanced life support, having an understanding of finances, managing their practices, integrating new technologies, having soft skills, mental health, and ergonomics, among other challenges, these newly graduated dentists face significant obstacles [20].

## Conclusion

In spite of the fact that there have been significant gains achieved in dental education in India, there are still ongoing challenges that need to be addressed. When the moment is right, India has the potential to become a worldwide leader in every sector of the industrial sector. It is the knowledge of senior practitioners, inputs from both young and old academicians, recommendations from statutory authorities in collaboration with stakeholders, and a strong political will that is the key to bringing our future dentists up to the same level as practicing dentists, academicians, and researchers around the world.

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