

Similarities and differences in specialty training of conservative dentistry and endodontics (India), operative dentistry (Pakistan) and restorative dentistry-endodontics (United Kingdom)

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Abstract

Dental education and training in Pakistan and India are largely influenced by the British system of education. However, there are some differences in the mode of postgraduate training in these countries. In Pakistan, hospital-based residency training is the mainstay, culminating in a fellowship diploma awarded by the College of Physicians and Surgeons of Pakistan. Whereas, in Indian students of dentistry pursue university-based MDS programme as the primary pathway to specialist training. From the beginning the Indian dental academia has remained vigilant in adopting a correct nomenclature for the specialty concerned with the dental conservation. They named it Conservative Dentistry & Endodontics while in Pakistan the same specialty termed Operative Dentistry has become an obsolete term and does not represent the scope of work practiced by specialists in this discipline. A simple addition of the term "Endodontics" to the present nomenclature of "Operative Dentistry" will resolve the matter of a missing identity in a clinical specialty in Pakistan. The present paper suggests the need for advocacy to change the term used for this particular dental specialty.

Keywords: Operative dentistry, Conservative dentistry, Endodontics, Dental education.

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Introduction

After independence from British rule in August 1947, the overall system of education in Pakistan and India has continued being influenced largely by the British academic system. The dental education in these two countries follow the foot footprints of what is taught and practiced in the dental colleges in the UK. This entails, not only adopting the teaching pedagogy, but methods of skills training and assessment of dental clinicians.

As in the United Kingdom, students in India and Pakistan

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become inducted in dental schools 12 years after high school education. Although, integration of basic sciences with clinical subjects have largely blurred the distinction, students learn about basic biomedical sciences generally in first two years after high school, and about the clinical subjects in their senior years. Students are annually accessed for cognitive knowledge and procedural skills (in a summative manner). Successful completion of the course results in a bachelor's degree in dental surgery (BDS). With so many similarities between UK and Pakistan with respect to dental academia, there are some differences as well.

In UK, dentistry is a five-year course followed by a house job and a vocational training, only after which a dentist is eligible to practice independently. The profession is overseen by the General Dental Council (GDC) which is the sole statutory body. In Pakistan, a dental graduate acquires the degree after four years of education, followed by a year-long internship or a house job in a hospital-affiliated dental college to satisfy the mandatory requirements of the Pakistan Medical & Dental Council (PMDC, the country's statutory body).

Whereas in India, BDS is a four to four-and-a half year-course. The internship portion however is considered a fifth year of BDS training in which the student does compulsory rotations in all branches of dentistry, including postings in certain rural areas to serve the underprivileged. Only then their statutory requirements are considered satisfactory and a practicing license by the Dental Council of India (DCI) is conferred.¹ The State Dental Council (SDC) requirements are in addition to that. The statistics of the number of institutions and centers offering postgraduate dentistry in Pakistan, India and UK are shown in Table-1.

There is striking difference in the mode of postgraduate training in Pakistan and India. In India, the primary pathway for a dentist to become a specialist is through a University-based post-graduation programme, or simply acquiring a MDS degree. For a three-year MDS course in any of the nine disciplines of dentistry, students compete in large numbers for the limited seats available in these

Table-1: Institutions offering Dentistry (graduate & post graduate) education in the India, Pakistan and United Kingdom.

Name of the state in India where dental college is located	Colleges in India offering BDS programme* n= 313	Indian dental institutions with MDS programme* n= 152	Colleges in Pakistan with BDS programme n= 49	Centers offering FCPS programme** n=121	United Kingdom & Ireland n=21
Andhra Pradesh	16	16	Lahore 7	29	University of Belfast
Assam	3	0	Karachi 14	24	University of Birmingham
Bihar	5	0	Peshawar 4	17	University of Bristol
Chandigarh	1	0	Islamabad 4	12	University of Wales
Chhattisgarh	6	2	Quetta 1	8	University of Chester
Daman & Diu	1	0	Rawalpindi 3	8	University of Dundee
Delhi	3	2	Hyderabad 2	7	Edinburgh Dental Institute
Goa	1	0	Abbottabad 4	5	University of Kent
Gujarat	13	6	Multan 3	4	University of Glasgow
Haryana	11	7	Faisalabad 2	3	University of Leeds
Himachal Pradesh	5	3	Mardan 1	2	University of Liverpool
Jammu & Kashmir	3	0	Mirpurkhas 1	~ Overseas 2	Eastman Dental Institute
Jharkhand	4	2	Larkana 1		King's College London
Karnataka	47	37	Sialkot 1		Barts & Royal London
Kerala	26	10	Sheikhupura 1		University of Manchester
Madhya Pradesh	15	7			University of Newcastle
Maharashtra	37	15			University of Sheffield
Manipur	2	0			University of Central Lancashire
Orissa	4	0			BPP University
Pondicherry	4	1			University College Cork, Ireland
Punjab	15	4			University of Dublin, Ireland
Rajasthan	16	4			
Tamil Naidu	29	19			
Telangana	12	0			
Uttar Pradesh	26	17			
Uttarakhand	2	1			
West Bengal	6	2			

*source= Dental Council of India

**source= College of Physicians & Surgeons of Pakistan

***source= Royal College of Surgeons of England, UK

~ Overseas Centre in Katmandu, Nepal.

Table-2: Dental Specialties in the India, Pakistan and United Kingdom.

India (n=9)	Pakistan (n=5)	United Kingdom & Ireland (n=9)
Oral maxillofacial Surgery	Oral maxillofacial Surgery	Oral maxillofacial Surgery
Orthodontics	Orthodontics	Orthodontics
Prosthodontics	Prosthodontics	Prosthodontics
Conservative Dentistry & Endodontics	Operative Dentistry ^ε	Endodontics
Periodontology	Periodontology	Periodontology
Paediatric & Preventive Dentistry	*	Pediatric Dentistry
Community Dentistry	**	Public Health Dentistry
Oral Radiology & Oral Medicine	***	Dental Radiology [†]
Oral Pathology & Oral Microbiology	~	Special Care Dentistry

^εStill retains an obsolete name

* Only MDS program exists, the FCPS program is yet to start 8

** Only a two year-long MCPS program exists 8

***Merged with oral maxillofacial surgery training

[†]No exit level examination exists at RCS level

~ Only MDS program exists, no FCPS program.

Table-3: Comparison of model of training: Conservative Dentistry & Endodontics in India vs. Operative Dentistry in Pakistan.

	Indian Modal	Pakistani Model	UK & Ireland Model
Name of programme	Conservative Dentistry & Endodontics	Operative Dentistry	Restorative Dentistry - Endodontics
Institution	Dental College	Hospital / Dental College	University / Hospital
Length of program (years)	3 years	4 years	2 general +3 specialist = 5 years
Exit level qualification	MDS	FCPS	MRD (Endo) at RCS London & RCPS Glasgow M Endoat RCS Edinburgh FFD (Endo) in Ireland
Year of initiation	19836	1995	Not confirmed
Pass rate *	High	Low	Moderate
Awarding body	University	College of Physicians & Surgeons of Pakistan	Royal College(s) of Surgeons in London, Glasgow or Edinburgh Royal College of Surgeons in Ireland
Thesis	Yes	Yes	No
Mid-level assessment	No	Yes	No
Statutory body	Dental Council India & State Dental Council	Pakistan Medical & Dental Council	General Dental Council, UK

*No objective criterion used; only subjective judgment was employed.

institutions (Table-2). The dental colleges and universities carry out the assessments, but the overall system of specialist training is overseen by the Dental Council of India. On the other hand, in Pakistan, although the MDS pathway does exist, it is not the primary one for acquiring advanced clinical training. Here, the modus operandi is hospital-based residency training, culminating in the fellowship diploma from the College of Physicians and Surgeons of Pakistan (CPSP)² in any of the five established dental specialties (Table-2).

Although the CPSP is responsible for maintaining a country-wide uniform standard of training, and carrying out the assessments at entrance, mid-level training and at exit level, registration of specialists remains under the domain of PMDC. This system is an influence from the UK where these roles are performed by the Royal Colleges of Surgeons (RCS) and GDC, respectively. In the UK, a dentist can become eligible to sit for the RCS specialist exit examination via both pathways i.e. following a hospital-based training programme or a University-based masters training. In both instances, the RCS assess the candidates and only those who are successful are added in the specialist register maintained by the GDC.³

The dental residency training in Pakistan runs on an apprentice model, where junior dentist (mentee) is supervised by a master trainer (mentor) for a minimum of four years. The mentee is treated as an employee of the hospital, hence a stipend or salary is paid against the patient care services he/she provides. On the other hand, the university post-graduation programme treats postgraduate scholars as graduate students and hence demands a fee from them for their educational training.

Another striking difference between India and Pakistan is

the nomenclature used for the dental specialty known in Pakistan as Operative Dentistry. In India this specialty is called Conservative Dentistry and Endodontics. Both countries adopted this specialty from the UK where it was known as a poly-specialty restorative dentistry comprising sub specialties of Endodontics, Periodontics and Prosthodontics. In the last 20 years however, they have adopted a mono-specialty model. The advanced clinical training is of three years but requires a two-year general professional training. Thus, in the UK it takes a minimum of five years for a BDS graduate to become an Endodontics specialist, compared to three and four years in India and Pakistan, respectively.

It is evident that Pakistani dental academia lacks certain programmes (Table-2) and it is high time specialties like Dental Public Health (DPH) or Community Dentistry and Paediatric Dentistry be established in Pakistan. Dental institutions face numerous difficulties recruiting and retaining faculty members for teaching these disciplines. Establishment of postgraduate training programmes will ensure future batches of dentists in these specialties.

The graduates of Operative Dentistry in Pakistan have the exact scope of work as Conservative Dentistry & Endodontics graduates of India. The similarities and differences in both the systems are summarised in Table-3. However, the Operative Dentistry programme in Pakistan is unique in retaining an obsolete name. The developed countries discussed this nomenclature issue and adopted the correct terminology three decades ago.^{4,5} It's imperative to note that over 65% of the curriculum in this specialty is Endodontics but it is missing from the title of the programme. Pakistani stakeholders of this specialty failed to adopt the correct nomenclature. Either they should follow their Indian counterparts and

adopt the title of their specialty i.e. Conservative Dentistry & Endodontics, as it is the most suitable nomenclature for the nature of work in this discipline (root canal, apical surgeries and dental conservation procedures), or simply add the suffix "Endodontics" in the existing programme title. Interestingly, the Indian dental academia adopted the correct nomenclature since the inception of their postgraduate dental programme as early as 1983.⁶

Conclusion

Advocacy is needed at the CPSP level for the suggested change in the dental programme title. A simple addition of the term "Endodontics" to the present "Operative Dentistry" will resolve this unique matter of a missing identity in a clinical specialty. Failing to do so will keep fellows deprived of Endodontist job opportunities in Saudi Arabia and Middle East countries. Moreover, fellowship graduates will continue to face difficulty in proving their eligibility for the Endodontics examination at the Royal College of Surgeons in the UK.⁷

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Conflict of Interests: The author belongs to the specialty for which he has suggested the name change, thus it

might constitute a potential conflict of interest with respect to the dental academia. However, there are no financial conflicts of interest.

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