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# The Need of Paediatric Dentistry Specialists in Pakistan

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## ABSTRACT

In the last decade, a rapid increase has been observed in the number of dentists due to establishment of a number of dental colleges in Pakistan. Very few of these institutions have Paediatric Dentistry Department. Similarly, no postgraduate Paediatric Dentistry training program exists in the two major provinces of the country. The objectives of this study were to map the pattern of paediatric dentistry services provided by the clinicians in teaching institutions and private practices. A cross-sectional study was conducted at dental departments of academic institutions and selected dental practices in Karachi. There was a statistically significant difference in preferences, selection of dental materials and pattern of paediatric dentistry services provided by the teaching dentists compared to the private practitioners. Both the teaching and non-teaching dentists need to update themselves in the provision of Paediatric Dentistry services such as fluoride application and fissure sealant placement.

**Key words:** Paediatric dentistry. Dental care. Karachi.

Dentistry is a discipline with well-established specialties and emerging sub-specialties. The College of Physicians and Surgeons Pakistan (CPSP) recognizes only 6 disciplines of dentistry. Paediatric dentistry is not in the list. Only a few teaching institutions have University-based training programs in Paediatric Dentistry. To-date there is no clinical membership or fellowship program, specialty board or assessment body in this discipline (Table I). None of the dental institutions in Karachi has any established department for paediatric dentistry clinical service or academic training. Therefore, it appears important to map the features of paediatric dentistry practice in Karachi so that the need of establishing a new training program can be assessed in this country.

A cross-sectional study was conducted to compare the paediatric dental care (preventive and restorative aspects) offered by the teaching and non-teaching dentists at 7 undergraduate and 5 postgraduate dental institutions with their attached clinical settings, and selected private dental practices in different parts of Karachi. Dentists registered with Pakistan Medical and Dental Council (PMDC), have completed at least one year internship after graduation and engaged in practice, teaching or both were included. The dentists who are not active in practice or had retired were excluded.

The study protocol was approved by the Aga Khan University Ethics Review Committee (Ref # 573-Sur/ERC-06). The written informed consent of the partici-

pants was obtained. A structured, self-administered questionnaire comprised of 10 questions regarding preferences, selection of materials and techniques used in providing paediatric dental care. However, in this short communication, only a portion of the data is shared. The questionnaire had two parts. The first part dealt with demographics (independent variables). The second part had 10 questions on paedodontics practice (response variables).

The total number of participants in the study was 168 with mean age of  $32.8 \pm 6.5$  years. There were 98 males and 70 females. Teaching group comprised of 71 (42.3%) participants while the rest 97 (57.7%) belonged to private practitioners. The response rate was 94.6% in the teaching group and 44.1% in the practitioners group. Both groups were comparable with respect to their age and the professional experience. Teaching and non-teaching dentists showed statistically significant differences in their pattern of preventive and restorative paediatric dentistry practices ( $p < 0.001$ ). Large proportions of practitioners believed that fluoride and sealants are not effective while a large proportion of teaching dentists considered these as temporary measures as shown in Table II.

**Table I:** Dental specialties diplomas in United Kingdom and Pakistan.

Royal Surgical Colleges, United Kingdom	College of Physicians and Surgeons, Pakistan
MFGDP	MCPS (Family Dentistry)
M Orth RCS	FCPS (Orthodontics)
M Surg Dent RCS	FCPS (Oral Surgery)
M Endo RCS	FCPS (Operative Dentistry)
M Prosth RCS	FCPS (Prosthodontics)
M Perio RCS	MCPS (Periodontology) minor diploma
M Com Dent RCS	No residency program in Community Dentistry (MPhil programs are offered in a few institutions)
M Paed Dent RCS	No program in Paediatric Dentistry (MDS training program in only one institution)

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**Table II:** Preventive and restorative services offered by the dentists (n = 168).

Clinical situation	Group	Never	Rare	Frequent	Mean ranks	Mann -Whitney p-value	Chi-sq. p-value
Fissure sealants on primary teeth	Teaching	12.7%	50.7%	36.6%	106.08	< 0.001	< 0.001
	Practice	49.5%	38.1%	12.4%	68.70		
Clinical situation	Group	Never	Rare	Frequent	Mean ranks	Mann -Whitney p-value	Chi-sq. p-value
Use of topical fluoride in practice	Teaching	33.8%	39.4%	26.8%	92.79	0.044	< 0.001
	Practice	45.4%	33.0%	21.7%	78.43		
Clinical Situation	Group	Amalgam	Composite	Compo-mer	GIC / RMGIC	IRM / ZOE	Chi-sq. p-value
Filling of deep cavity in primary molar	Teaching	25.4%	4.2%	4.25%	50.75%	15.5%	< 0.001
	Practice	43.3%	22.7%	0%	21.7%	12.4%	
Clinical situation	Group	Never	Rare	Frequent	Mean ranks	Mann -Whitney p-value	Chi-sq. p-value
Use of stainless steel crowns	Teaching	57.7%	39.4%	2.8%	88.76	0.259	0.20
	Practice	66.0%	33.0%	1.0%	81.38		

Sealants and topical fluorides were taken as preventive services while primary fillings and stainless steel crowns were considered as a restorative dental service. Level of significance was kept at 0.05.

The inappropriate practicing pattern in paediatric dentistry can possibly be attributed to the lack of training opportunities in this specialty and lack of teachers in this area who can be role models and source of inspiration for future clinicians. Additionally, lack of interest may be attributed to the practitioners' perception that children dental care involves poor monetary outcomes. This study findings are somewhat closer to the data from general dentists of UK<sup>1</sup> and specialists of Australia and New Zealand<sup>2</sup> but the difference between our two study groups was statistically significant. It means that the two sets of clinicians made noticeably different choices.

At least 37% dentists in USA have been reported to place topical fluorides routinely on primary teeth as a preventive service.<sup>3</sup> Despite having established and convincing evidence for the use of sealants,<sup>4</sup> a large proportion i.e. 45 – 50% of respondents in the present practitioners group never provided fluorides and sealants to their paediatric patients. This is an alarming situation which needs to be addressed on a priority basis. A similar trend was observed among teaching group too, as 12% and 33% of them never used sealants and fluorides respectively. There are globally accepted evidence based guidelines for restoring primary teeth with fillings and stainless crowns,<sup>5,6</sup> but this study participants' decision making was inadequate in this area.

Availability of resources, materials and first hand information can also be a factor for poor clinical decision-making in some clinical scenarios. But largely, there was a deficiency in formal training programs and assessment bodies for Paediatric Dentistry, Dental Public Health and Periodontology. Lack of trained specialists in these areas would result in poor delivery of education at institution level. This finally translates into poor decision-making and treatment provision by the clinicians. However, this vacuum does offer an opportunity for young dental graduates to acquire training in these subjects from abroad and get a good career in dental academia in Pakistan.

Study Questionnaire: Section 1 (demographics)		
Questions	Codes	Skip
Id no	Unique identification	
Gender		
Age	1 = male, 2 = female	
Year of graduation/ College of graduation	1 = KMDC 2 = Baqai 3 = FJDC 4 = JMDC 5 = Hamdard 6 = Altamash 7 = Darulsehath 8 = LMC 9 = de'Montmorency 10 = Nishter 11 = KCD Peshawer	
Number of years in service/experience	12 = Gandhara 14 = Others	
Area of practice in Karachi	1 = North district 2 = East district 3 = South district 4 = West district 5 = Central district	
Group status	1 = Teaching dentists 2 = Non-teaching	
Employer	1 = KMDC 2 = Baqai 3 = FJDC 4 = JMDC 5 = Hamdard 6 = Altamash 7 = Darulsehath 8 = LMC 9 = AKU 10 = LNH 11 = Dow	If 2, then skip question 9
Specialty of interest	1 = Operative 2 = Endodontics 3 = Prosthodontics 4 = Oral Surgery 5 = Periodontics 6 = Orthodontics 7 = General practice	

Study Questionnaire: Section 2 (response variables)		
Fissure sealants on primary teeth in my practice are done _____	1 = Never 2 = Rare 3 = Selected pt. 4 = Frequent 7 = Others	If 7, then please specify
Use of topical fluoride on baby teeth in my practice _____	1 = Never 2 = Rare 3 = Selected pt. 4 = Frequent 7 = Others	If 7, then please specify
My material of choice when restoring a vital primary molar with a deep cavity is _____	1 = Amalgam 2 = Composite 3 = Compomer 4 = GIC 5 = RMGIC 6 = Reinforced ZOE 7 = Others	If 7, then please specify
Preformed Stainless steel crowns in my clinic are done _____	1 = Never 2 = Rare 3 = Selected pt. 4 = Frequent 7 = Others	If 7, then please specify

It is concluded that the overall quality of paediatric dental care was found to be inadequate in both the study groups. It is recommended that emphasis should be given on paediatric dentistry at an undergraduate curriculum. Furthermore, the paediatric dentistry should

be established as a separate specialty and residency programs should be initiated by the prospective trainers in this area.

## REFERENCES

1. Milsom KM, Tickle M, Blinkhorn A. The prescription and relative outcomes of different materials used in general dental practice in the North West region of England to restore the primary dentition. *J Dent* 2002; **30**:77-82.
2. Tran LA, Messer LB. Clinicians' choices of restorative materials for children. *Aust Dent J* 2003; **48**:221-32.
3. Swigonski NL, Yoder KM, Maupome G, Ofner S. Dental providers' attitudes regarding the application of fluoride varnish by paediatric health care providers. *J Public Health Dent* 2009; **69**:242-7.
4. Beauchamp J, Caufield PW, Crall JJ, Donly K, Feigal R, Gooch B. Evidence-based clinical recommendations for the use of pit-and-fissure sealants. *J Am Dent Assoc* 2008; **139**: 257-68.
5. Waggoner WF. Restorative dentistry for the primary dentition. In: Pinkham JR, Casamassimo PS, Fields HW Jr, McTigue DJ, Nowak AJ, editors. Paediatric dentistry: infancy through adolescence. 4th ed. St. Louis: Elsevier Saunders; 2005: p. 341-74.
6. Randall RC, Vrijhoef MA, Wilson NH. Efficacy of pre-formed metal crowns vs. amalgam restorations in primary molars: a systematic review. *J Am Dent Assoc* 2000; **131**:337-43.

