

ORIGINAL ARTICLE

Self-assessed Confidence of Dentists in Pediatric Dentistry: A cross-sectional study

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ABSTRACT

Aim: To assess the confidence of dentists in provision of dental treatment for children and to explore the status of the current pediatric dental services offered by the dental practitioners.

Methodology: A self-structured questionnaire was administered. Data was collected from both academic and non-academic dental practitioners and specialists. Pediatric dentists were excluded from the study.

Results: The results show that there is lack of undergraduate training in the subject of pediatric dentistry. Dentists reported low confidence in various pediatric dental procedures. The provision of dental services to the pediatric patients was also observed to be inadequate.

Conclusion: The undergraduate education of pediatric dentistry is of paramount importance. The curriculum should be structured in such a way so that it translates into provision of best dental services to the children. There is need for continuing education courses for dentists in pediatric dentistry in order to ensure adequate dental care for children.

MeSH Keywords: Dentist's Practice Pattern, Pediatric Dentistry, Pedodontics

INTRODUCTION

The specialty of Paediatric Dentistry involves the provision of oral healthcare for children from birth to adolescence. It specially caters to the needs of patients who are very anxious or are too young to cooperate for the dental treatment. This includes children with extensive oral disease, children with physical, medical, intellectual and/or emotional disability.¹ This involves a variety of skills and procedures from all disciplines of dentistry which are tailored according to the needs of the children.²

Oral health is a fundamental part of overall health. Oral healthcare for children should be safe, easily accessible and cost effective so as not to affect the child's quality of life.² A survey conducted in Karachi showed that Pediatric Dentistry was the field of least interest by the dental practitioners.³ This lack of interest may be attributed to the low monetary returns associated with pediatric dental care and the lack of training opportunity in this specialty⁴. A comprehensive survey regarding the burden of disease in oral conditions classify caries as the main condition affecting the teeth of the children. Untreated dental caries has wider implications on the quality of life affecting the functional, emotional and social well-being of the child⁵. A study conducted on caries experience of pre-school children in Karachi reported 51% incidence with a mean DMFT score of 2.08⁶. Another study conducted in Lahore reported a caries prevalence of 71% with mean DMFT 2.98 in school-going children⁷.

With this much burden of dental problems, improvement in our dental services for children is required. Therefore, it is imperative to assess the confidence of our dentists in provision of dental treatment for children and to explore the status of the current pediatric dental services offered by the dental practitioners.

MATERIALS AND METHODS

Ethical approval was received from the ethical review board of University College of Dentistry, University of Lahore. A cross-sectional study was conducted and a convenience sample of 113 dentists⁸ was included. Dentists who had completed one-year house job and were engaged in practice, both academic and non-academic were included while pediatric dentist specialists and non-practicing dentists were excluded. A self-structured questionnaire was administered explaining the purpose of the study and ensuring the confidentiality of the data. The questionnaire consisted of demographic details of the participants, a section on the confidence of the practitioners in various dental procedures in

children and the last section explored the different pediatric dental services provided by the participants. SPSS (v 24) was used for data analysis. The means and standard deviations of the quantitative variables were determined and descriptive statistics were calculated for each response.

RESULTS

The mean age of the participants was 31.6 years (SD±1.27). 47.6% had clinical experience of less than 5 years, 34.1 % had experience of 5-10 years and 18.3% had more than 10 years of experience. 93.7% of the dentists routinely perform dental procedures on children in their clinical practice.

Figure 1: Barriers in provision of dental services to children

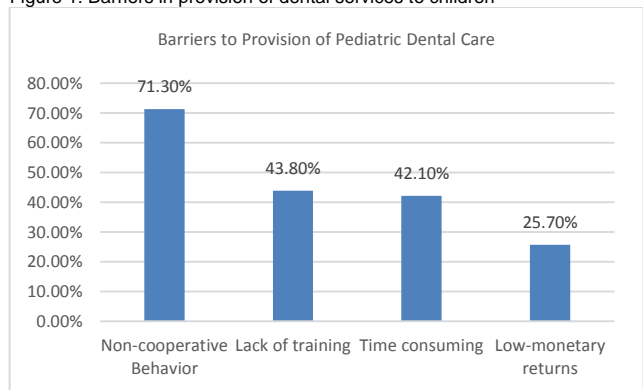


Table 1: Mean confidence score of the participants in various pediatric procedures

Procedure	Overall Mean Score
Restorations of teeth	5.0
Extractions of primary teeth	5.0
Fissure Sealants	4.1
Trauma management in children	3.9
Pulpectomy in primary teeth	2.7
Pulpotomy in primary teeth	2.4
Behavior management of non-cooperative children	2.2
Stainless-steel Crowns	2.1
Treatment of patients with special healthcare needs	1.3

53.4% participants reported that they have received clinical training of pediatric dentistry at undergraduate level. However, only 23.1% participants reported that they feel that they have been adequately

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trained at undergraduate level in treating pediatric patients effectively. Regarding the self-perceived comfort in treating pediatric patients, 4.2% reported being extremely comfortable, 48.9% reported being comfortable and 46.9% reported that they are not comfortable.

Exploring the barriers in provision of dental services to the pediatric patients, where participants could choose multiple options, non-cooperative behavior of the child was reported as the major barrier. It was followed by lack of undergraduate training in pediatric dental procedures, procedures being time consuming and low monetary returns as major barriers. The results are summarized in Figure 1.

Table 2: Provision of various dental services to the pediatric patients.

Clinical Procedures	Response of participants in % (n=113)		
	I do all	I do some	I refer/defer all
Restorations of primary teeth	100 (113)	0	0
Extractions of primary teeth	100 (113)	0	0
Fissure Sealants	33.6 (38)	66.4 (75)	0
Pulpectomy in primary teeth	25.7 (29)	52.2 (59)	22.1 (25)
Trauma management in children	21.3 (24)	62.8 (71)	15.9 (18)
Pulpotomy in primary teeth	18.6 (21)	46.9 (53)	34.5 (39)
Behavior Management of non-cooperative children	5.3 (6)	18.6 (21)	76.1 (86)
Space maintainers	0	18.6 (21)	81.4 (92)
Treatment of patients with special healthcare needs	0	17.7 (20)	82.3 (93)
Stainless-steel Crowns	0	11.5 (13)	88.5 (100)
Treatment under general anesthesia	0	4.4 (5)	95.6 (108)

DISCUSSION

The study provides an introspective analysis of the current status of pediatric dental care provided by the dentists. The results of the study highlight major discrepancy in the provision of pediatric dental care.

53.4% of the participants reported that they had received clinical training of pediatric dentistry during their undergraduate program which highlights the lack of training in pediatric dentistry by dental colleges across Pakistan. This is further supplemented by only 23.1% reporting that they feel adequately trained in effectively treating pediatric patients. The results resonate with many studies reporting lack of training in pediatric dentistry at undergraduate level worldwide^{9,10}.

The mean confidence scores of participants show that they feel less confident in various pediatric dental procedures. It may again be attributed to the deficiency in the teaching of pediatric dental procedures at undergraduate level. Participants rated themselves most confident in restorative treatment and extraction of the primary teeth. This may be because these are the areas that are mainly emphasized in the undergraduate training. These findings corroborate with other studies as well¹¹. Helen Rodd reported similar findings in his study conducted in UK where participants perceived themselves to be most confident in restorative dental procedures⁸.

A low mean confidence score was given to placement of stainless-steel crowns (SSC) in primary teeth which was reflected in dentists reporting its limited use in their practice. SSC is the restoration of choice in primary teeth with extensive carious lesions. Similar trends have been reported in the literature regarding lesser use of SSC by the general dentists worldwide¹².

Regarding provision of various dental procedures to the child patients, similar pattern was noticed whereby simple restorative procedures and extractions of the primary teeth are routinely done by all dentists but as the complexity of the procedures increased, majority of dentists reported that they do the procedures on 'some' patients and more referral/deferring of treatments was reported. Pediatric endodontic procedures received an average mean score in terms of confidence of the dentists and more participants reported performance on 'some' patients and deferring/referring the rest. Pediatric endodontics poses unique challenges to the practitioners and so the attitude of the general dentists towards these procedures varies considerably.¹³ Because of lack of competence in this regard, more general dentists choose to extract the pulpally involved teeth instead of doing endodontic treatment¹⁴.

Table 1 shows the self-reported confidence of the participants in various pediatric dental procedures. The table is ordered so that the procedures in which participants are most confident are at the top and those with lowest confidence are at the bottom. The mean was worked out using the 5 point scale. Procedures with response of 'very confident' were given a score of 5 while 'not confident at all' received a score of 1. The mean of the scores was then calculated. Table 2 summarizes the results regarding the provision of various dental services to the pediatric patients.

Participants also reported deficiency in provision of dental services in areas like treatment of children with special healthcare needs (SHCN) and those requiring treatment under general anesthesia. Children with SHCN have more untreated dental diseases which leads to deteriorating oral health.¹⁵ Reluctance and lack of competency of the dentists in treating these children adversely affects the provision of dental care to these children which adds to their agony¹⁶.

Unfortunately, there has been a deficiency of post-graduate courses in Pakistan in the subject of Pediatric Dentistry. It has been recently introduced formally at undergraduate level and still has a long way to evolve. Lack of training at both undergraduate and postgraduate level results in poor delivery of pediatric dental care by the dentists as highlighted by the results of this study. Limitation of our study is that it relies on self-reported data which may erroneously report the actual reality. The study also reports confidence and does not measure the competence of the dentists in various procedures.

CONCLUSION

The undergraduate education of pediatric dentistry especially the hands-on clinical training is of paramount importance with respect to the provision of dental care for children. The curriculum should be structured in such a way so that it translates into provision of best dental services to the children. Areas like advanced restorative procedures, pediatric endodontics and treatment of children with special healthcare needs warrant greater emphasis. There is also need for more continuing education courses for general dentists in pediatric dentistry in order to ensure adequate dental care for children.

Disclaimer: None to declare.

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