



INFANT ORAL CARE – A SURVEY OF DENTISTS PRACTICING IN DELHI, INDIA

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ABSTRACT

Introduction: Changing trends in occurrence of dental caries has made Early Childhood Caries (ECC) a growing dental public health problem in India. Small number of pediatric dentists cannot meet the demand of the entire infant population. General practitioners could play a crucial role in preventing ECC by conducting early examination of infants. Hence the present study was conducted with an aim to assess knowledge and practices of general dental practitioners regarding infant and early childhood oral health care in Delhi.

Methods: The sampling frame was comprised of general dental practitioners practicing in Delhi. Those who were specialized in pediatric dentistry were excluded from the survey. Data was collected using a validated questionnaire. The survey consisted of different sections, including early childhood oral health profile and practitioners knowledge of early childhood oral health. Descriptive statistics and bivariate analyses were done to analyze the data

Results: A total of 192 (76.8%) of the 250 practitioners responded. Overall, infants and preschoolers constituted < 10% of patients in the respondents' practices. Not even half of participants were aware of professional organizations' recommendation about the timing of children's first visit to the dentist. On average, these participating dentists from Delhi thought children should visit the dentist by 3 years of age.

Conclusions: A significant number of dentists in Delhi are still unaware of the recommendation that children should first visit the dentist by 12 months of age.

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INTRODUCTION

Children are very important part of a country's demography, and children's health determines the future of the nation.¹ Dental caries is still the most common oral health problem among children.² Early childhood caries is a particularly virulent form of caries, beginning soon after tooth eruption, developing on smooth surfaces, progressing rapidly, and having a lasting detrimental impact on dentition.³ Toddlers may exhibit poor growth and nutrition when chewing is painful. Older children may miss school days or be distracted due to dental pain.⁴ Young people may interact less with their peers and society when they are uncomfortable or embarrassed by the appearance of their teeth. Overall total effect is diminished quality of life.⁵

The American Academy of Pediatric Dentistry (AAPD) recognizes that infant oral health is the foundation upon which preventive education and dental care must be built to enhance the opportunity for a lifetime free from preventable oral diseases.⁶ Changing trends in occurrence of dental caries has made Early Childhood Caries (ECC) a growing dental public

health problem in India. Various epidemiological studies had reported the prevalence of ECC ranging from 55% to 81%, among Indian pre-schoolers.⁷ A study by *Goel et al.* (2000) showed a prevalence of ECC about 81.25% in the age group of five to six years. Small number of pediatric dentists cannot meet the demand of the entire infant population. General practitioners could play a crucial role in preventing ECC by conducting early examination of infants.⁸ So the aim of the present study is to assess knowledge and practices of general dental practitioners regarding infant and early childhood oral health care in Delhi.

METHODOLOGY

Ethical approval: Ethical Approval was sought from the Institutional Ethical Committee of Sudha Rustagi College of Dental Sciences & Research, Faridabad.

Sampling frame: The population investigated was general dental practitioners practicing in Delhi, during 2014. Those who were specialized in paediatric dentistry were excluded from the survey. Sample was procured using convenience sampling technique. Study population was comprised of

randomly selected two hundred and fifty (250) dentists, practicing in Delhi which was visited personally by the investigator. The aim and purpose of the study was explained to them. Those who agreed to participate (184 dentists) in the study were given the questionnaire which was collected later according to their convenience.

The questionnaire was modified from a tool developed by *Stijacic et al*⁸ to conduct a similar survey among Canadian dental practitioners. The survey instrument consisted of twenty five (25) items divided into four (4) different sections, including Practitioners' knowledge and practices related to prevention & management of ECC, Continuing dental education profile, Practice profile and Personal details. It was pilot-tested with 30 practicing dentists, and their responses were included in the final survey.

Statistical Analysis

Survey data were analysed with Statistical Package for Social Sciences (version 21) Descriptive statistics (Frequencies and Means ± Standard Deviation [SD]), Bivariate analyses (χ^2 , Pearson Correlation coefficient and analysis of variance) were done. A *p* value of ≤ 0.05 was considered statistically significant.

RESULTS

Of the 184 questionnaires distributed, 36 were not found to be suitable for evaluation (due to missing entries). Final results were based on the analysis of remaining 148 questionnaires. Respondents were dental practitioners who identified their practices as either group general (76, 49.4%), group speciality (28, 42%), solo general (24, 15.6%), or solo speciality (8, 5.2%). There were 327 (69%) males 142 (31%) females. Respondents practiced in urban (176, 94.8%), and suburban (8, 5.2%) areas. Dental practice profile of survey respondents showed that majority i.e.39.9% of practitioners were practicing from 5-10 years. Whereas, 31.8% were practicing from 11-20 years, 14.9% were practicing for more than 20 years followed by those (13.5%) who were practicing from 5 years only.

Table 1 Respondents view about importance to prevent ECC

Early examinations are important to prevent early childhood caries	Respondents	
	Number	Percent
Yes	132	89.2
No	16	10.8
Total	148	100.0

Table 1 showed the different respondents view about importance to prevent ECC. Almost 90% (132) respondents believe that early examinations are important to prevent ECC. Whereas only 10.8 % believed that early examinations are not that important to prevent ECC.

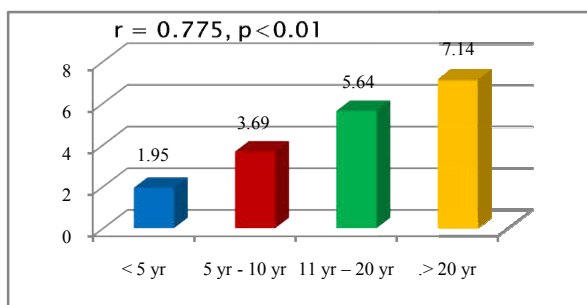


Figure 1 Mean Age recommended by respondents for first dental examination

Figure 3 showed mean age recommended by respondents for first dental examination. Correlation analysis revealed that the age practitioners recommended for children's first visit to the dentist was significantly correlated with the number of years in practice (*r* = 0.775, *p* < 0.01). This meant that younger practitioners were more likely to recommend earlier visits for young children.

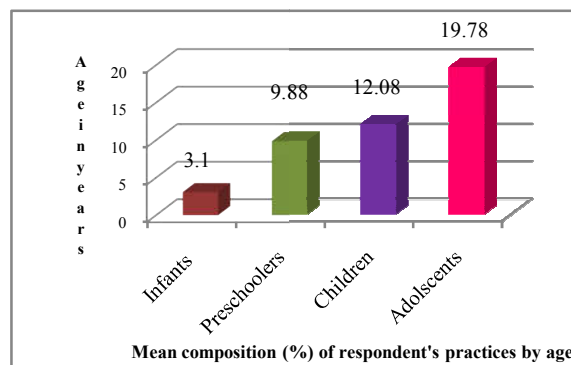


Figure 2 Mean composition (%) of respondent's practices by age

Table 2 Average Number of infants and preschool children/month seen by respondent and its proportion of these infants and preschool children having ECC

	Minimum	Maximum	Mean	SD
Average Number of infants and preschool children/month seen by respondent	0.00	8.00	1.94	1.25
Proportion of these infants and preschool children having ECC	0.00	100.00	51.5	24.93

On an average, practitioners reported seeing 2 preschool children (ranged 0-8) each month and estimated that nearly 51.46% of them would normally have ECC (Table 2).

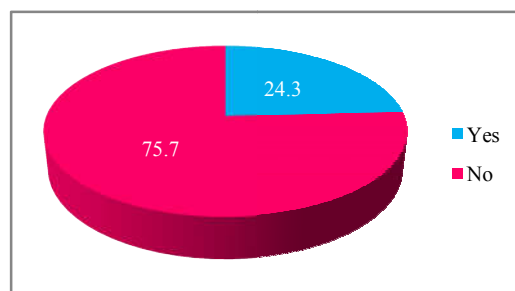


Figure 3 Respondents who are comfortable providing care for children with early childhood caries

Only one quarter (24.3%) of the respondents reported to be comfortable in providing care for children with early childhood caries. Almost three quarter of respondents (75.7) did not feel comfortable in providing care for children with ECC.

Prevention or Management practice used by the practitioners: Nearly half of (48.64%) participants reported that they are using ART, parental counselling, and anticipatory guidance. Very few, i.e.13.5 % reported that they use knee to knee positioning (Figure 4). Unfortunately, nearly 10% of respondents reported that they are not familiar with the terms anticipatory guidance and knee to knee positioning.

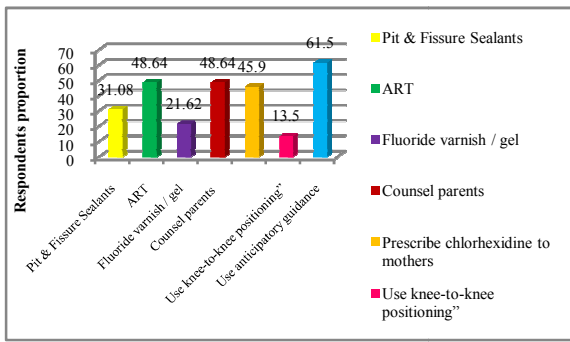


Figure 4 Prevention or Management practice used by the practitioners

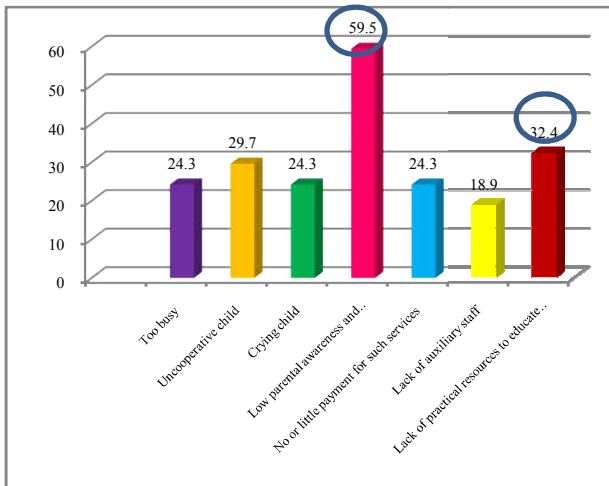


Figure 5 Perceived barriers in carrying out prevention & management

When questioned about the barriers that dentists encountered when providing care in their offices, respondents identified 24.3 % were too busy to respond, 29.7% were uncooperative, for 24.3%, children crying was found to be the main barrier while treating ECC, for 59.5 % participants, low parental knowledge and awareness was the main barrier, followed by barriers like payment issues (24.3%), lack of auxiliary staff (18.9%) and lack of practical resources to educate (32.4%)(Fig 5).

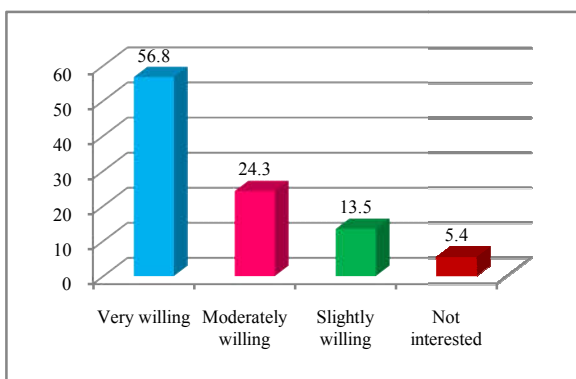


Figure 6 Willingness of respondents to receive training on ECC prevention

Above mentioned figure 6 is showing the willingness of respondents to receive training on ECC prevention. Out of total, 56.8% of the respondents were very willing, 24.3% were moderately willing, 13.5% were slightly willing and only 5.4% fell in the not interested category.

DISCUSSION

The present study was conducted with an aim to assess knowledge and practices of general dental practitioners

regarding infant and early childhood oral health care in Delhi. Results of the present study showed that a considerable number of dental practitioners were unaware of current recommendation regarding first dental visit. On an average, general dental practitioners of Delhi responding to our survey recommended a first visit by 4.5 years of age, full 3.5 years later than the recommended age. More recently graduates having newer practice (< 5 years) recommended earlier visits. This finding is in accordance with a study conducted by Stijacic *et al*⁸ among Canadian dentists. This could be due to some exposure to children during their undergraduate education or the younger ages of these new practitioners, combined with their patience and enthusiasm. Undergraduate programs should attempt to increase the exposure of senior students to younger preschool children and infants.⁹ A recent study indicates that dentists exposed to infants during their training are more likely to recommend dental visits before 1 year of age and are significantly more likely to undertake oral examinations in children younger than 3 years of age in their subsequent practice.¹⁰ Two important areas where dental practitioners and primary health care providers can contribute to improve oral health in children are by encouraging parents to go for first dental visit of a child on first birthday (and make an appropriate referral to one if necessary) and by giving parents appropriate anticipatory guidance.^{11,12} Many practitioners responding to our survey reported that they counsel parents on the steps they can take to prevent tooth decay. Unfortunately, many of these dentists were unfamiliar with “anticipatory guidance,” & “knee to knee positioning”, which are recognized ways to prevent and manage ECC. Probably this could be due to the reason that as most dentists are not exposed to infants during their undergraduate training, this practice may be foreign.

CONCLUSION

Early childhood caries is a theoretically preventable public health problem that affects the youngest members of our society who are dependent on others for their oral hygiene and whose access to prevention of early decay is limited. A significant number of general dental practitioners in the present study, showed deficiencies in their knowledge & practices related to infant dental care. More research should be done on how to best deliver information on infant oral health and hands-on exposure to related procedures to dental students. This will increase the general dental practitioners’ ability to examine infants, and improve parent education, which will improve the oral health status of infants in our society.

References

1. Available at http://www.unicef.org/sowc2012/pdfs/SOWC%202012Main%20Report_EN_13Mar2012.pdf
2. Benjamin RM. Oral Health: The Silent Epidemic. *Public Health Reports*. 2010;125(2):158-159
3. Çolak H, Dülgergil ÇT, Dalli M, Hamidi MM. Early childhood caries update: A review of causes, diagnoses, and treatments. *Journal of Natural Science, Biology, and Medicine*. 2013; 4(1):29-38. doi:10.4103/0976-9668.107257.
4. Agili DE. A systematic review of population-based dental caries studies among children in Saudi Arabia. *The Saudi Dental Journal*. 2013; 25(1):3-11. doi:10.1016/j.sdentj.2012.10.002.

5. William Papaioannou, Constantine J Oulis, and John Yfantopoulos, "The oral health related quality of life in different groups of senior citizens as measured by the OHIP-14 questionnaire," *Oral Biology and Dentistry*, vol. 3, no. 1, pp. 1, 2015. View at Publisher • View at Google Scholar
6. American Academy of Pediatric Dentistry. Guideline on periodicity of examination, preventive dental services, anticipatory guidance, and oral treatment for infants, children, and adolescents. *Pediatr Dent* 2010; 32(special issue):93-100.
7. Available at. <http://ir.uiowa.edu/cgi/viewcontent.cgi?article=4848&context=etd>
8. Stijacic T, Schrouth RJ, Lawrence HP. Are Manitoba Dentists Aware of the Recommendation for a First Visit to the Dentist by Age 1 Year? *JCDA* 2009; 74 (10): 903-903
9. EPSTEIN AS. Using Technology Appropriately in the Preschool Classroom. *Highscope Extensions*.2005; 28:1-19.
10. AlHammad NS, Salama FS. Effectiveness of an infant oral health care educational intervention on knowledge of dental students. *Advances in Medical Education and Practice*. 2011; 2:193-199. doi:10.2147/AMEP.S19415.
11. Mohamed N, Barnes Jo. Knowledge, Attitudes and Practices (Kap) Regarding Early Childhood Caries among Nurses Working in a Low Socio-Economic Area. *Arch Community Med Public Health*.2015; 1(1):1-5.
12. Ismail AI, Nainar SM, Sohn W. Children's first dental visit: attitudes and practices of US pediatricians and family physicians. *Pediatr Dent* 2003; 25(5):425-30.

