



Barriers to the Treatment of Early Childhood Caries among General Dentists in and Around Hyderabad, Telangana. A Cross-Sectional Study

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Abstract

Objective: Determine the barriers that prevent general dentists from treating early childhood caries in children.

Material and Procedures: A descriptive cross-sectional study was conducted with fifty general dentists in and around Hyderabad, India, using a simple random sample. Each candidate was given the questionnaire. Using descriptive statistics, the absolute and relative frequencies, mean, median, and standard deviation were calculated.

Results: indicated that general dentists encountered a variety of barriers when treating early childhood caries. Providing care for children can be stressful and difficult for dentists (65.4%), and they experience time constraints, i.e., they do not spend much time with children (42.4%). Training in the field of child behaviour management improves their ability to treat early childhood caries.

Conclusion: General dentists should receive proper training in dealing with children as part of their curriculum or through continuing education courses so that they can treat early childhood caries effectively and efficiently for the benefit of society.

Keywords: Dental Caries; Child; Dental Fear; Barrier

Introduction

Dental caries known as early childhood caries (ECC) primarily affects young children in their early years. In India, ECC is one of the most frequently disregarded diseases among children [1]. The maxillary incisors are where the disease first appears, but it quickly spreads to other teeth. Pain, sensitivity of teeth to temperature changes (hot or cold), trouble in brushing and chewing, holding food in the mouth for a long time, abscesses connected with teeth, fever, and recurrent episodes of cough and cold are the signs and symptoms of ECC.

If untreated, it can result in extended low food intake, which can worsen overall health, cause caries to impair freshly erupted permanent teeth, cause school days to be missed, and have a negative impact on one's appearance and self-esteem.

Every population has a different level of ECC prevalence [3]. Far East Asia has the highest prevalence and severity of the condition, with a prevalence in 3-year-olds ranging from 36 to 85%. In In-

dia, 8 to 48-month-olds had an ECC prevalence of 44% [1,4-10]. According to reports, the prevalence of ECC among 0- to 3-year-old children in rural south India is 40.6% who had cavitated surfaces in 49.7% and non-cavitated surfaces in 50.3% [11]. Despite significant advancements in the field of caries control over the past few decades, a high ECC prevalence has been recorded in young infants [12,13]. An important societal priority is illness control, which can be accomplished if the population segments with the greatest requirements are located [13].

The main goal of this study was to look at the dental care systems (and dental staff) that are most likely to have favourable health outcomes for young children with dental caries and minimum exclusion rates. In order to investigate whether dentists' beliefs and attitudes towards providing dental care for young children can act as a barrier to the provision of care, this paper applies a questionnaire developed from standardised measure (Barriers to Childhood Caries Treatment (BaCCT)) developed by a group of paediatric and public health dentists and psychologists working in a number of

countries, under various health care systems and cultural norms. The ensuing research inquiries were answered. Do dentists think that the health care system, parents, young children, or dentists’ own self-confidence in their own abilities to provide treatment are obstacles to providing dental care for kids? Do dentists think that restoring children’s teeth is worthwhile? Are there any differences in how dentists feel about giving preventative or restorative dental care to children.

The ensuing research inquiries were answered. Do dentists think that young children’s beliefs in themselves, their parents, the medical system, or dentists’

The identification of roadblocks within the oral health-care delivery system may be driven by dentists’ views. The purpose of this study was to identify potential barriers to the treatment of early childhood caries in and around Hyderabad, Telangana, India.

Methodology

This cross-sectional study was conducted on practising dentists in and around the city of Hyderabad. A standardised online questionnaire that was developed by adopting questions from Barriers to Childhood Caries Treatment (BaCCT) was mailed to dentists to collect data. This study was carried out for a period of three months from December 2019 to march 2020. The local dental association branch was consulted for the email addresses and phone numbers of practising dentists. The aim of the study was communicated to a total of 572 dentists in and around Hyderabad. 396 dentists out of 572 volunteered to participate in the study, however only 292 were included because their forms were completely filled out.

The self-administered, closed-ended online questionnaire consists of two components which included demographic details and perception component which in turn has 3 domains that assess potential roadblocks to children’s dental care: Domain 1 (five items focused on dentist’s own perceptions), Domain 2 (five items pertaining to dentists’ beliefs regarding the requirement to restore primary teeth), and Domain 3 (five items depending on parent expectations), comprised the questionnaire. The total number of assertions (items) included in the measure was 15.

Regarding dental treatment for preschool children (5 years old), dentists were asked to score their level of agreement with each statement on a 5-point Likert scale (1 strongly disagree to 5 strongly agree). Things with a value greater than three were deemed roadblocks by dentists.

The data collected was compiled and was checked for completeness. The findings obtained were coded and entered into the Micro-

soft excel 2019. The analysis was done using Statistical Package for Social Sciences (SPSS 25.0 version). The significant value was set at P<0.05. Tables and graphs were generated using Microsoft word.

Results

Out of 292 participants, 52.3% participants (N = 153) were males and 47.6% (N = 139) participants were females. The mean age of the participants was 29.9 years with a minimum age of 25 years and maximum age of 55 years. Among 292 participants included in the study, 72.6% (N = 212) have completed the MDS course and the remaining 27.3% (N = 80) have completed BDS.

Many dentists in Domain 1 concur with the claims made in two factors, such as that caring for children can be stressful and difficult for the dentist (65.4%) and that they feel time-constrained, thus they don’t spend much time with children (42.4%).

Question no	Assertion	Barrier (%)	Non-barrier (%)
1	Filling children’s teeth is distressing for dentists.	65.4%	34.6%
2	Dentists dislike giving children local anaesthesia.	42.1%	57.9%
3	Providing dental care to children is difficult.	46.9 %	53.1%
4	Dentists seldom have sufficient time to spend with young patients.	42.4%	57.6%
5	Dentists prefer to send toddlers to paediatric dentists for treatment	69.5%	30.5%

Table 1: Domain 1 - dentist’s own perceptions.

Domain 2 showed dentists views on tooth restoration by briefing the assertions like decaying deciduous teeth are generally better left untreated than filled, if decayed teeth are asymptomatic, they should be kept untreated, dentists believe there is no necessity to fill baby teeth, the time required to fill children’s cavities might be better spent on their parents and dentists won’t fill cavities in kids who aren’t good patients. The vast majority of dentists reject claims that saving decaying deciduous teeth is not worth the effort.

Domain 3 showed Distribution of dentists based on their opinion of parental expectations. In Domain 3, parents’ expectations regarding the care they wish their child to receive were not perceived as a barrier; however, they expected decayed deciduous teeth to be extracted, which constituted a barrier to treatment.

Question no	Assertion	Barrier (%)	Non- barrier (%)
6	Decaying deciduous teeth are generally better left untreated than filled.	31.8%	68.2%
7	If decayed teeth are asymptomatic, they should be kept untreated.	45.8%	54.2%
8	Dentists believe there is no necessity to fill baby teeth.	24.3%	75.7%
9	The time required to fill children’s cavities might be better spent on their parents.	82.5%	17.5%
10	Dentists won’t fill cavities in kids who aren’t good patients.	58.9%	41.1%

Table 2: Domain 2- dentists’ views on tooth restoration.

Question no	Assertion	Barrier (%)	Non- barrier (%)
11	Decaying deciduous teeth are generally better left untreated than filled.	73.2%	26.8%
12	If decayed teeth are asymptomatic, they should be kept untreated.	77.7%	22.3%
13	Dentists believe there is no necessity to fill baby teeth.	41.4%	58.6%
14	The time required to fill children’s cavities might be better spent on their parents.	32.8%	67.2%
15	Dentists won’t fill cavities in kids who aren’t good patients.	78.4%	21.6%

Table 3: Domain 3 - dentists’ perception about parental expectations.

Discussion

This descriptive cross-sectional study was conducted to identify the obstacles considered by general dentists in and around Hyderabad when treating childhood caries. The attitudes of general dentists towards the treatment of child patients have been the subject of very few studies [14,15], and there is not a single study in the state of Telangana that examines this issue. The clinical treatment options always depend on the clinician’s knowledge and disposition towards the patient.

Consistent with the findings of other studies [16], the general dentists viewed treating children as difficult and stressful. There was a consensus among dentists regarding the treatment of primary teeth, namely that whenever possible, restorations should be performed on primary teeth.

In this study, general dentists did not cite time constraints as an obstacle to treating children. Saudi Arabian researchers reached the same conclusion [17]. In contrast, another study found that time was a significant barrier to treating children [18]. The expectation of parents to restore their children’s teeth was not a barrier in this study, but it was a barrier among Libyans [19]. Parents favoured extraction of carious deciduous teeth, which was once again considered a barrier to ECC treatment.

Referral of paediatric patients was not viewed as a barrier, as the majority of general dentists attempted to manage child patients on their own. Those who referred cases were typically male dentists with greater experience. These results were comparable to those observed among dentists in Canada [20].

Limitations of the study is that the sample size is less and is confined to a smaller area. The response rate of the participants was also less. To overcome these limitations a study has to be conducted with larger sample size. to the best of our knowledge this is first of its kind study in Telangana state which can be considered as a pilot study for future massive programs in this area.

Very few studies have emphasised the importance of understanding the barriers general dentists face when treating early childhood caries. The general dentists vastly outnumber paediatric dentists, so it is their responsibility to care for paediatric dental patients. General dentists should receive proper training in working with children as part of their curriculum or through continuing education programmes so that they can treat ECC effectively and efficiently for the greater good of society.

Conclusion

According to the study's findings, caring for children can be stressful and challenging for 65.4% of dentists, and 42.4% of dentists reported feeling time-constrained and spending little time with kids. To treat ECC successfully and efficiently for the benefit of society, general dentists should get appropriate training in working with children as part of their curriculum or through continuing education programmes.

Bibliography

1. Simratvir M., *et al.* "Evaluation of caries experience in 3-6-year-old children, and dental attitudes amongst the caregivers in the Ludhiana city". *Journal of Indian Society of Pedodontics and Preventive Dentistry* 27 (2009): 164-169.
2. Kumarihamy SL., *et al.* "The prevalence of early childhood caries in 1-2 yrs olds in a semi-urban area of Sri Lanka". *BMC Research Notes* 4 (2011): 336.
3. Gaidhane AM., *et al.* "Prevalence and determinant of early childhood caries among the children attending the Anganwadis of Wardha district, India". *Indian Journal of Dental Research* 24 (2013): 199-205.
4. Bhayade SS., *et al.* "Assessment of social, demographic determinants and oral hygiene practices in relation to dental caries among the children attending Anganwadis of Hingna, Nagpur". *Journal of Indian Society of Pedodontics and Preventive Dentistry* 34 (2016): 124-127.
5. Chawla HS., *et al.* "Trend of dental caries in children of Chandigarh over the last sixteen years". *Journal of Indian Society of Pedodontics and Preventive Dentistry* 18 (2000): 41-45.
6. Dash JK., *et al.* "Prevalence of dental caries and treatment needs among children of Cuttack (Orissa)". *Journal of Indian Society of Pedodontics and Preventive Dentistry* 20 (2002): 139-143.
7. Dixit S., *et al.* "Molluscum contagiosum and dental caries: a pertinent combination". *Journal of Indian Society of Pedodontics and Preventive Dentistry* 27 (2009): 197-201.
8. Goel P., *et al.* "Prevalence of dental disease amongst 5- 6 and 12-13 year old school children of Puttur municipality, Karnataka State-India". *Journal of Indian Society of Pedodontics and Preventive Dentistry* 18 (2000): 11-17.
9. Gopinath VK., *et al.* "Assessment and treatment of dental caries in semi-urban school children of Tamilnadu (India)". *Journal of Indian Society of Pedodontics and Preventive Dentistry* 17 (1999): 9-12.
10. Goyal A., *et al.* "Epidemiology of dental caries in Chandigarh school children and trends over the last 25 years". *Journal of Indian Society of Pedodontics and Preventive Dentistry* 25 (2007): 115-118.
11. Henry JA., *et al.* "Prevalence and pattern of early childhood caries in a rural south Indian population evaluated by ICDAS with suggestions for enhancement of ICDAS software tool". *International Journal of Paediatric Dentistry* 27 (2017): 191-200.
12. Wyne A., *et al.* "The prevalence and pattern of nursing caries in Saudi preschool children". *International Journal of Paediatric Dentistry* 11 (2001): 361-364.
13. Mahejabeen R., *et al.* "Dental caries prevalence among preschool children of Hubli: Dharwad city". *Journal of Indian Society of Pedodontics and Preventive Dentistry* 24 (2006): 19-22.
14. Marinho VC. "Evidence-based effectiveness of topical fluorides". *Advances in Dental Research* 20.1 (2008): 3-7.
15. Beil H., *et al.* "Dental care utilization and expenditures in children with special health care needs". *Journal of the American Dental Association* 140.9 (2009): 1147-1155.
16. Lee GH., *et al.* "Barriers to providing oral health care to preschool children-differences between paediatric dentists' and general dental practitioners' beliefs". *Community Dental Health* 32.1 (2015): 32-38.
17. Mathews S., *et al.* "Attitudes of general dental practitioners towards child patients". *Annals and Essences of Dentistry* 7.3 (2015): 1a-5a.
18. Halawany HS., *et al.* "The attitude of private dental practitioners towards treatment and management of children in Riyadh, Saudi Arabia". *Journal of the Pakistan Dental Association* 20.4 (2011): 245-249.
19. Arheiam A., *et al.* "Perceived barriers to preventive dental care among Libyan dentists". *Libyan Journal of Medicine* 9 (2014): 240-243.

20. Klooz DN and Lewis DW. "Ontario dentists: Practice variation in referrals to pediatric dentists". *Journal of the Canadian Dental Association* 60.11 (1994): 981-986.