

# Awareness and Perception of Oral Health Care in Infants and Children among Paediatricians in Srinagar City

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## Abstract

**Introduction:** Parents frequently seek Paediatricians supervision during normal growth and development of their children. The repeated contact between patients and paediatricians renders an ideal prospect for Paediatricians to determine risks associated with oral health and enlighten parents on counselling and preventive treatment modalities during development phases. The study was thus aimed to gather information and assess knowledge and attitude of the Paediatricians from Srinagar city regarding oral health in infants and children. **Materials and Methods:** A cross-sectional survey was organized between January 2019 and May 2019 to assess Paediatricians awareness regarding dental health and their attitudes in relation to oral health. This study was performed among 50 randomly selected Paediatricians of Srinagar city. Data was collected and subjected to descriptive analysis. **Results:** Majority of the Paediatricians were familiar of the speciality of pediatric dentistry, the significance of milk teeth and considered the importance of periodic dental visits for children. It was also revealed that most of the Paediatricians showed significantly less awareness ( $P < 0.05$ ) of the first dental visit, early childhood caries, fissure sealants, importance of fluoride and role of medicated syrups in promoting dental caries. **Conclusion:** This survey reveals that Paediatricians strongly believed in having an active role in promoting oral health. Dental training should be incorporated in curriculum during medical training and Paediatricians need to regularly rejuvenate themselves on recent advancements and updates related to infant oral health which can be transmitted to their patients.

**Keywords:** Knowledge, Oral Preventive Care, Pediatric Dentistry

## 1. Introduction

Pediatric dentistry is a branch of dentistry that deals with the dental care and treatment of children. The objective of pediatric dentistry is to develop a positive attitude and behaviour toward oral health, parental guidance and counselling regarding preventive dentistry and treatment modalities.

The American Academy of Pediatric Dentistry (AAPD) asserts the significance of prevention, diagnosis and early treatment required to sustain the oral health of infants, children and adolescents<sup>1</sup>. Children first visit usually takes place at pediatric clinics, where Paediatricians can determine risks associated with dental diseases and advice parents regarding the preventive dentistry and associated treatment modalities. Paediatricians routinely scrutinize

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most children during their early years. Parents usually seek Paediatricians advice in attaining their child's normal growth and development. If proper counselling about their child's eruption of teeth and prevention of dental related diseases is imparted at this age, better oral health can be acquired for these children. They can impart screening services for early recognition and diagnosis of oral and dental diseases and refer those who are in need. There is a need of multi disciplinary approach between medical and dental team to provide preventive oral health care. To accomplish this, Paediatricians must acquire proper knowledge to educate the parents. Thus, Paediatricians are in a supreme position to impart preventive education and early diagnosis of dental diseases<sup>2</sup>.

Therefore, Paediatricians can be the perfect medium for providing oral health education and advising parents regarding preventive dentistry for prevention of oral diseases. The prevention and education are the best ways of promoting oral health collectively with health professionals such as Paediatricians and Pedodontists, by the contact that they establish with their patients since the 1st year of life<sup>3</sup>. Paediatrician as an educator has to encourage parents about the necessity of oral health. The oral health promotion is essential so that not only parents are educated but also promotion and prolonging oral health of their children can be collectively achieved<sup>4</sup>. The circumstances which mainly affect the preventive dentistry attainment is the deficient oral health awareness among paediatricians. The prospective oral health of the child is determined by their child's first dental visit. Oral health during infancy is the basis upon which dental health must be started. The recommended age for the first dental visit is by first year of life<sup>5,6</sup>.

The need of the study is to determine the knowledge among Paediatricians regarding infant oral health and preventive oral health care of the infants and children.

## 2. Materials and Methods

A cross-sectional survey was organized between January 2019 and May 2019 to assess pediatrician's level of dental health awareness, oral health attitudes and perceptions regarding infant oral health care visits. The questionnaire was piloted on 5 pediatricians to check its congruity, clarity and ambiguity in questions. This population was not included in the main study.

Verbal and written informed consent was procured from the pediatrician's by disclosing that the data collected were for research purpose only. Pediatricians who agreed to participate in the survey were assured of confidentiality. A specially prepared and pretested proforma, exclusively created for recording all the applicable data.

The paediatricians practicing in Srinagar City were selected for the study who had a Postgraduate Diploma (DCH) or a Master's Degree (MD) or both, Diplomate of National Board (DNB) and other degree in Pediatrics. Prior appointment and the schedule for the study were obtained from the respective Paediatricians. A total of 50 Paediatricians could be approached as others either did not give consent for the survey or were not available during the visit to their workplace.

The survey consisting of 13 closed questions and the questionnaire was handed over to 50 paediatricians practising currently in the Srinagar city and collected after 15 minutes. For statistical analysis, MedCalc Software, version 12.2.1.0 (Mariakerke, Belgium) was used.

## 3. Results

### 3.1 Participant Characteristics

A total of 50 questionnaires were completed. Nearly 60% of the participants had <9 years of experience and 12% were females. Over half (64%) of the Paediatricians were private practitioners while 36% worked at general hospitals (Table 1).

**Table 1.** Demographic distribution of respondents

Variables	N	N (50)	%
Gender	Males	44	88
	Females	6	12
Practice Setting	Public hospital	18	36
	Private (clinic/hospital)	32	64
Experience after qualification	≤9 years	30	60
	≥10 years	20	40

### 3.2 Oral Health Knowledge & Attitudes of Paediatricians

54% of paediatricians knew the existence of the specialty of Pediatric Dentistry/Pedodontics. Majority (76%) of Paediatricians were aware of the importance of milk

teeth. For questions pertaining to fluoride, 56% of the respondents didn't know that topical application of fluoride prevents tooth decay and 50% acknowledged that fluoridated toothpaste could be applied by children less than 3 years of age. Majority of the paediatricians (64%) were of the opinion that bottle-feeding with milk containing sugar at night could result in dental caries. Less than one third (28%) of the respondents suggested first dental visit before 1 year of age and 80% were unaware of treatment modality of fissure sealant application. 54% of the Paediatricians were familiar with Early Childhood Caries. Astonishingly, (56%) Paediatricians responded incorrectly that medicated syrups may not lead to dental caries.

### 3.3 Practices of Paediatricians

Around 16% of the respondents inspected children's oral health routinely during consultations, while most Paediatricians (60%) routinely encouraged parents to take their children to dentist.

### 3.4 Training in Pediatric Oral Health Care

30% of paediatricians had obtained oral health training and only 16% had attended oral health conferences previously. 46.66% of Paediatricians had received oral education after qualification, while 20% received it during medical school and 33.33% during residency. Most of the Paediatricians (90%) reported their eagerness of obtaining oral health education (Table 2).

**Table 2.** Association of pediatricians knowledge and practices regarding oral health

S. No.	Parent/Caregiver Knowledge of Oral Health	Options	N (50)	%	P value
1	Do you know the existence of the specialty of Pediatric dentistry/ Pedodontics	Yes No	33 17	66 34	<0.05*
2	Milk teeth are important for the child	Agree Disagree Unsure	38 6 6	76 12 12	<0.01*
3	Babies without teeth need their mouth cleaned	Agree Disagree Unsure	18 12 20	36 24 40	NS
4	Is it essential to take your child for regular dental visits?	Agree Disagree Unsure	30 16 4	60 32 8	<0.05*
5	Medicated syrups may lead to dental decay.	Agree Disagree Unsure	18 28 4	36 56 8	<0.05*
6	Awareness about Early childhood caries (ECC)	Yes No	27 23	54 46	NS
7	Breast feeding/Bottle feeding of the child at night is bad for his/her teeth	Agree Disagree Unsure	32 14 4	64 28 8	<0.01*
8	Age recommendation for first dental visit	≤1 years old 3 years old 5 years old	14 30 6	28 60 12	<0.01*
9	Fluoride prevents tooth decay when applied topically	Yes No Don't know	16 28 6	32 56 12	<0.01*

10	Fluoridated toothpaste suitability under 3 years of age	Yes No Don't know	25 15 10	50 30 20	<0.05*
11	Awareness of 'fissure sealants'	Yes No	10 40	20 80	<0.001*
12	Have you ever received any education/ training on oral health for young children?	Yes No	15 35	30 70	<0.003*
	If yes when?	During medical school During residency After qualification	3 5 7	20 33.33 46.66	NS
13	Have you received any oral health training within the last five years?	Yes No	8 42	16 84	<0.002*
14	Are you interested in further oral health education	Yes No	45 5	90 10	<0.001*
15	Entering oral health discussion with parents/caregivers	Yes No	4 46	8 92	<0.001*
16	Identifying oral pathologies (dental caries, abscess etc)	Yes No	8 42	16 84	<0.002*

\*ANOVA (P value<0.05)

## 4. Discussion

Paediatricians are in an exceptional position to identify and screen oral diseases amongst children<sup>7</sup>. Combined roles of dental and other health care providers are indispensable to assess effects of oral health promotion and early interventions.

The present study showed that 66% of Paediatricians were aware of the existence of the specialty and the importance of the primary dentition and 76% considered the importance of milk teeth and examining them (Table 1). The findings are in agreement where more number of Paediatricians were familiar about the specialty and significance of the primary dentition<sup>8</sup>. The findings are in agreement with earlier study by Sanchez *et al.*<sup>9</sup> where it was found that 64% of the Paediatricians surveyed considered themselves to have poor to fair knowledge regarding paediatric preventive dental care. Shetty and Dixit in their study reported 76% of the Paediatricians awareness related to oral health amongst children<sup>2</sup>.

In dentistry, there is an assumption that breast feeding /bottle feeding, especially at night with prolonged duration, promotes dental caries. According to the current study, majority of the participants were of the opinion that Breast feeding/Bottle feeding of the child at night is

bad for his/her teeth. It was reported in a study conducted by Shivaprakash *et al.*, that majority of the respondents felt the need of counselling on feeding and weaning habits in infants<sup>10</sup>.

In most countries, routine dental check-ups are not organised. It has been observed that a dentist as compared to a Paediatrician sees young children only in case of pain or other urgent problems. However, overall Paediatricians knowledge of dental topics was found to be unsatisfactory<sup>11</sup>.

Majority of the paediatricians in the present study believed that it was imperative to accompany the child for periodic dental visits. However according a study meagre 18.8% would refer children to a paediatric dentist<sup>12</sup>. Most Paediatricians referred patients to dentists only when there was an explicit dental complaint such as pain. This might be attributed to unawareness of health professionals including Paediatricians regarding American Association of Pediatric Dentistry (AAPD) guideline, which states that the first screening of the child is suggested at the time of the eruption of the first tooth and not after 12 months of age<sup>1</sup> Few more studies found that 17% to 23% of paediatricians endorsed that the first dental visit should occur < 1 year of age of the child, and 29% advocated first dental visit at < 2 years<sup>13,14</sup>. Therefore,

the results are invariable with previous studies where only 28% of the paediatricians endorsed that the first visit to a dentist should ideally happen before the first birthday of the child.

About 65.2% of paediatricians recommended the 1<sup>st</sup> dental visit in 6 months to 1 year as compared to 40% by Kumari *et al.*, 52.5% by Shivaprakash *et al.*<sup>10,15</sup> Pediatricians have a fair understanding about their importance in infant oral health maintenance but they routinely do not advise it and the advice given is often inadequate. In this study knowledge of Early Childhood Caries (ECC) among Paediatricians was found to be 54%. Some Indian studies presented with majority (>90%) Paediatricians having knowledge about ECC<sup>16</sup>.

According to the present study, comprehensive awareness on preventive strategies was moderate, wherein 36% of the respondents concurred that gum pads should be cleaned. The findings were similar to studies where 25% of them agreed to a study by Shivaprakash *et al.* and 32% to a study by Kumari *et al.*<sup>10,15</sup>

In the current study, 32% of the paediatricians recorded the importance of fluoride supplements. In a study conducted in Belgium, only, 7% of Paediatricians routinely prescribed fluoride supplements to children<sup>3</sup>.

According to our study, only 30% of Paediatricians had obtained guidance and training in oral health and 90 % of the practitioners were enthusiastic to undertake training in oral health. The results were similar to another study where 25% and 90% of pediatrician's had received training in oral health and were eager to receive education respectively<sup>17</sup>.

Complete health cannot be achieved without obtaining dental health in all health service programmes. Pediatricians screen young children and establish early relationships with their parents and are in a strong position to provide preventive information from birth<sup>18</sup>.

According to the present study, 16% of the Paediatricians were capable of Identifying oral pathologies (dental caries, abscess etc). In a survey in the US, only 33% of paediatricians scrutinized for early signs of tooth decay<sup>19</sup>. Paediatricians, compared to general physicians, were more convinced in diagnosing dental caries and counselling parents about oral health<sup>20</sup>.

In a study, the majority of paediatricians were uncertain in their capability to detect the signs of dental caries (49.8%)<sup>20</sup>.

In the present study, only 30% respondents had received oral health education during medical school.

Similar findings were reported in a survey conducted in US, with more than one third of respondents had not received dental education during medical school and 42.3% of the respondents had not received oral health training during residency<sup>13</sup>. Pediatricians believed that oral health education and training was inadequate<sup>21</sup>. The awareness related to Pediatric dentistry was little in undergraduate curricula. It is impervious for undergraduate courses to gear professionals for long without postgraduate education<sup>22</sup>. Many universities around the world have implemented oral health into the curriculum<sup>23,24</sup>. Continuing medical education programs involving oral health topics should be incorporated for paediatric faculty.

The present study has few limitations. The results cannot be extrapolated and generalized to the entire paediatrician population. The self-administered survey may not reflect actual practices and attitudes.

Synergy between the dentists and Paediatricians are vital for oral health awareness<sup>21,25</sup>. Oral health awareness should be imparted at each stage of a paediatrician's medical course and awareness about oral health must be included in curricula.

## 5. Conclusion

Infants and children first place of visit is the Paediatricians clinic more often than the dentist, so Paediatricians must have awareness regarding oral health. This survey reveals that Paediatricians strongly believe that they have a crucial and a significant role to play in oral health promotion. Lack of knowledge regarding oral health problems makes it burdensome for them to promote oral health. There is an urgent need for improvement in the curriculum and training for preventive oral health. Pediatricians in general, need to rejuvenate themselves on recent advancements and updates regarding infant oral health to safeguard that all their patients receive periodic preventive dental care. Some of the measures that can be taken to improve the Paediatricians knowledge about prevention of dental diseases like inter disciplinary coordination between medical and dental communities, including oral health education and preventive dentistry topics in the medical curriculum, continued medical and dental education programs for Paediatricians, articles related to preventive dentistry to be published in medical journals and encouraging group practice with pedodontists.

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