

# First Dental Visit: Age Reasons Oral Health Status and Dental Treatment Needs among Children Aged 1 Month to 14 Years

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## ABSTRACT

**Aim:** The aim of this study was to see the age and also the reasons for the child's first dental visit and to assess the oral health status and treatment desires.

**Materials and methods:** The study involved 133 children aged between 1 month and 14 years, who reported to the department of pediatric and preventive dentistry. All parents/legal guardians of the study participants gave written consent for participation in the study. Information on the child's age and reason for the dental visit were collected from a questionnaire given to parents. The children's dental condition was assessed by decayed, missing, and filled teeth (dmft) and DMFT values.

**Statistical analysis used:** Statistical Package for Social Sciences (SPSS) version 21 and categorical data were compared by using Chi-square test. The level of significance was set at 0.05.

**Result:** Age of the child for first dental visit was male: 85.7% at 9 years and female: 75.00% at 4 years. Majority of children who visited the dentist were age 7 years. The most common chief complaint about the primary visit was caries, and the second was tooth pain.

**Conclusion:** Children report for the primary dental visit most commonly solely after 7 years and for complaints like caries and tooth pain. Children make their first dental visit too late (usually at the age of 7 years) in reference to medical recommendations (between 6 and 12 months of life). More of restoration was the treatment of need by 47.00%. The results of this study indicate unhealthy oral health creating their first dental visit and low health awareness of parents and guardians.

**Keywords:** American Academy of Pediatric Dentistry, Early childhood caries, First dental visit, Oral health.

*International Journal of Clinical Pediatric Dentistry* (2022): 10.5005/jp-journals-10005-2406

## INTRODUCTION

Dental caries is one of the most common chronic diseases affecting children in developing countries. Early childhood caries, or tooth decay in children younger than 6 years, is the most common chronic disease among children.<sup>1-3</sup> Early childhood caries prevalence increases and leads to psychosocial, functional, and growing problems among children. Early childhood tooth decay is preventable and largely reversible in its early stages through self-care, use of professional services, and exposure to community interventions such as water fluoridation. During dental visits, children can receive an assessment for disease risk, early detection and treatment services, preventive care such as fluoride therapy, and anticipatory guidance. To ensure exposure to prevention early in life, professional organizations recommend that children have a dental home by 12 months of age.<sup>4</sup> One of the reasons for unsatisfactory dental health among the youngest population is the delay in the first visit of the child to the dentist. The American Academy of Pediatric Dentistry (AAPD) and the American Dental Association (ADA) recommends that the child's first visit to the dentist should take place within 6 months of eruption of the first primary tooth and no later than at the age of 12 months (AAPD, 2014; ADA, 2000),<sup>5,6</sup> while other sources suggest 12–18 months as the optimal time for the first visit (Adamowicz-Klepalska, 2009; Marcinkowska et al., 2013).<sup>7,8</sup> Argentine researchers Furze and Basso indicate that the first dental visit of a preventive character should take place in the fourth month of intrauterine life. During this visit, the expectant mother receives information about caries, its infectivity, is instructed that the mother is the main source of transmissible *Streptococcus mutans*, and is advised on how to

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**How to cite this article:** Padung N. First Dental Visit: Age Reasons Oral Health Status and Dental Treatment Needs among Children Aged 1 Month to 14 Years. *Int J Clin Pediatr Dent* 2022;15(4):394–397.

**Source of support:** Nil

**Conflict of interest:** None

provide oral care to the child and possible preventive procedures. The aim of this visit is to stimulate the interest of the pregnant woman in her own health but also in the health of her unborn child (Furze and Basso).<sup>9</sup> The information offered to parents at the first visit could inspire greater interest in the child's dental health and could accordingly mitigate the course of caries. The child's first dental visit has a significant impact on shaping a positive attitude and tolerance towards further treatments and helps to develop trust in the dentist. Thus, exposing children to the dental setting at a very early age can diminish their dental anxiety, whereas early dental education may improve the parent's self-efficacy in managing the oral health of their children.<sup>10</sup> The ADA recognizes the patient's chief complaint as an essential component for the delivery of competent and quality oral health care. It serves as a source of information for both the care provider and the patient. Hence, the main aim of this study was to know the average age at which parents first seek dental care for their children and also to find out the common reasons for

seeking dental care at the first visit to the School of Dental Sciences, Sharda University, Uttar Pradesh, India.<sup>11</sup>

## MATERIALS AND METHODS

The research protocol obtained approval from the Institutional Ethics Committee, Ref. No. SU/SMS&R/76-A/2019/142 on 18<sup>th</sup> October 2019. The study group consisted of 133 children who had their first dental visit. All subjects were patients and parents reporting to the outpatient department in the department of pediatrics and preventive dentistry. Sample selection of children in the age group of 1 month to 14 years, reporting to the department of pediatrics and preventive dentistry. Informed consent was obtained from parents. Data on the child's age and reason for the dental visit were collected by interviewing the parents; a clinical pro forma was designed to record data. The state of oral health and dental treatment needs were assessed based on clinical examination using mouth mirror and a dental probe. The reasons for their visit were divided into the following five categories:

- Prophylactic examination,
- Tooth pain,
- Tooth decay,
- Injury to tooth and associated structures,
- Others.

Data were analyzed using SPSS version 21. Categorical data were compared by using Chi-square test. Continuous data were tested for normality by using Shapiro–Wilk test. Parametric tests of significance (independent *t*-test and one-way analysis of variance) were used for inferential statistics. Else, the nonparametric tests (Kruskal–Wallis test and Mann–Whitney *U* test) were used. The level of significance was set at 0.05.

## RESULTS

A total of 134 children visited the department of pediatric and preventive dentistry for the first time between November 2019 and January 2020. Records of 133 children were utilized, of which 77 were male (mean  $8.32 \pm 3.147$ ) and 56 were female (mean  $8.02 \pm 3.446$ ) *p*-value shows 0.595, NS (Table 1).

Table 2 shows the mean DMF(T) among males ( $0.41 \pm 1.122$ ) was high as compared to females ( $0.41 \pm 1.385$ ) *p*-value shows 0.998

NS, the decayed, missing, filled surface [DMF(S)] among males ( $0.72 \pm 1.933$ ) was high as compared to females ( $0.77 \pm 2.565$ ) *p*-value shows 0.898 NS, DMF(T) among males (mean  $2.37 \pm 3.080$ ) was high as compared to females (mean  $2.13 \pm 3.015$ ) *p*-value 0.645 NS, DMF(S) among males (mean  $5.06 \pm 6.493$ ) was high as compared to females (mean  $4.20 \pm 6.493$ ) *p*-value 0.477 NS.

Majority of children who visited the dentist were of age 7 years (Fig. 1). Most common chief complaint for their visit was tooth decay (male 43.60% and female 33.90%) (Fig. 2). The predominant reason for the child's first dental visit was caries, the need for treatment was restoration with 47.00%, followed by pulp therapy 29.90% and extraction 21.60% (Fig. 3). The youngest patient who required treatment due to caries-related complications was a boy aged 2 years, visiting the dentist due to toothache.

## DISCUSSION

The child oral health care ought to be seen because the foundation on which a lifetime of preventive education and dental care are often built so as to help assure the best oral health into childhood. Oral examination, anticipatory guidance together with preventive education, and acceptable therapeutic intervention for the child will enhance the chance for a lifetime of freedom from preventable oral unwellness, emphasized in education regarding the importance of oral health for general health and adequate dietary and healthful habits, moreover as basic info concerning dental caries, so as to encourage the parents to stick to a program.<sup>12</sup> The longer a child's initial dental visit is delayed, more the chances he or she is to develop serious dental issues that might doubtless deteriorate rapidly in the absence of correct care and treatment. Unobserved and untreated dental caries will result in infection and moderate to severe pain, which may actively prevent children from eating, sleeping, and enjoying daily activities, additionally ultimately resulting in high-priced dental treatment and, in some cases, early loss of teeth. These consequences might have an effect on children's overall health and development. Given these problems, the investigation of early dental visitation is warranted.<sup>13</sup>

Most of the kids within the current study visited dental clinics for the primary time at the age of 7 years. These results were not in accordance with the American Academy of Pediatrics (AAP) and AAPD tips. The mean age of kids visiting the dental workplace was more than the age suggested by the AAP, and therefore the AAPD,

**Table 1:** Mean age association between sex

	Sex	N	Mean	Std. deviation	p-value
Age	Males	77	8.32	3.147	0.595, NS
	Females	56	8.02	3.446	

**Table 2:** Oral health status

	Sex	N	Mean	Std. deviation	p-value
DMFT	Males	78	0.41	1.122	0.998, NS
	Females	56	0.41	1.385	
DMFS	Males	78	0.72	1.933	0.898, NS
	Females	56	0.77	2.565	
dmft	Males	78	2.37	3.080	0.645, NS
	Females	56	2.13	3.015	
dmfs	Males	78	5.06	6.493	0.477, NS
	Females	56	4.20	7.538	

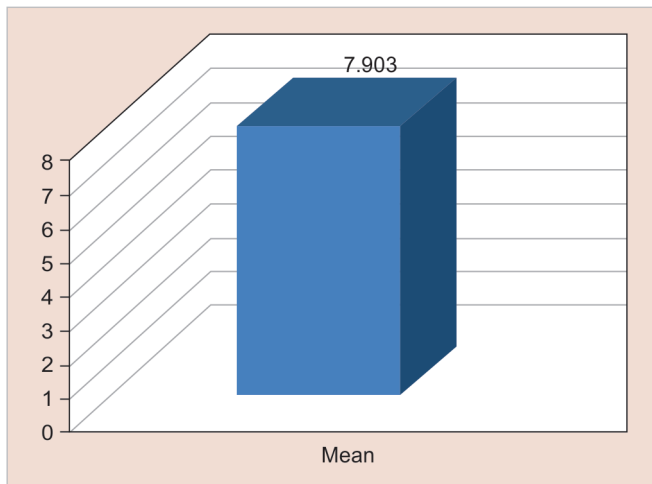


Fig. 1: Mean age at first dental visit

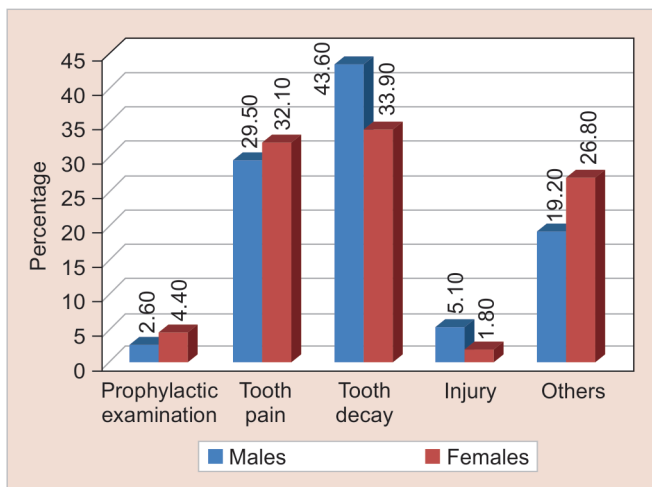


Fig. 2: Reason for the first dental visit

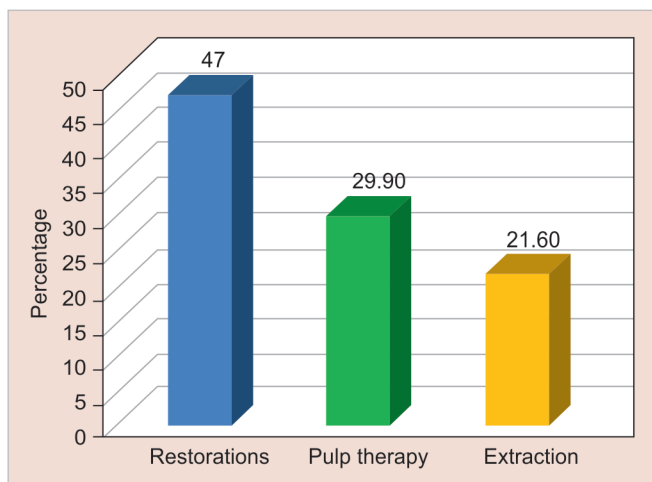


Fig. 3: Prevalence of need for various treatments

and this influences the dearth of information of parents about the age of the primary dental visit. The foremost common reasons for the primary dental visit were the presence of decayed teeth and dental pain perception. Only 2.60% of males and 4.40% females of children had visited the dentist for dental check-ups. Asymptomatic

dental clinic attendance was not common in this report. This could provide evidence that parents are neither aware nor conscious of oral health prevention for their children. Very similar findings were presented by Wilk-Sieczak et al., who reported that 63% of children made their first dental visit due to the need for treatment (tooth decay and pain).<sup>14</sup> Daou et al. reported the reason for the first consultation; the most common was the presence of decayed teeth (50.9%) and dental pain perception (29.5%).<sup>4</sup> Yahya et al., Soxman, and Masiga in their respective studies suggested that the most common reason for the child's first dental visit was dental caries and its related complications.<sup>15-17</sup> Some study shows different reasons; Olatosi et al. reported the most common reason for visiting the dental clinic was dental pain (33.1%).<sup>10</sup> Ramakrishnan and Dharsini, in this retrospective study, the maximum number of children who reported their first dental visit was between 13 and 17 years (46%). The most common chief complaint for the visit was pain (47%) and the second common complaint was malocclusion (20%).<sup>11</sup>

Results from the present study and other previous studies clearly suggest that universally, there are still no established practices for parents/caregivers to take their infants to visit the dentist at the recommended age.<sup>12</sup> Indian researchers reported an older age range for the child's first dental visit: Nino et al. indicated that children visit the dentist for the first time at age 7,<sup>18</sup> while a retrospective study by Meera et al. found that 59% of children have their first visit at the age of 6–12 years, and only 8.52% by the age of 3 years.<sup>19</sup> Studies carried out in Bulgaria by Mileva and Kondeva revealed that the greatest number of children making their first dental visit was 3–6 years old (51.9%), and the smallest number were those younger than 1 year (1.73%).<sup>20</sup>

Ghimire et al. reported that in Nepal, most children making their first dental visit were 7–11 years old (52.7%), and only 7% were younger than 3 years.<sup>21</sup> Studies by Murshid found that in Saudi Arabia, most children visit the dentist at the age of 3–5 years (52.9%) and less often at the age under 3 years (32.2%).<sup>22</sup>

In order to enhance oral health among children, it is essential that oral health-related education and education for motivating the parents of young children are provided throughout each dental visit. This additionally concerns pregnant women, who have been found to be a lot willing to follow all kinds of counsel throughout this period.<sup>23</sup> Cooperation in early childhood dental caries interference is additionally expected of non-dental medical employees (including pediatricians, general practitioners, and nurses). They should encourage their patients to schedule the primary dental visit for the child within 6 months of the eruption of the first tooth, and also make sure visits take place regularly.<sup>24</sup>

Limitation of this study is that few children were included (smaller sample size). It is counseled that in children below the age of 6 years, brushing with fluoridated dentifrice should be supervised so as to stop general systemic. Regarding the preventive program, most of the children need pit and fissure sealant application. However, the practicability of pit and fissure sealants in the Indian state of affairs is questionable. However, on a priority basis for selected clusters of school children, pit and fissure sealant application can be taken as preventive measures. An honest protocol for dental and oral care should be necessary, and skilled dental follow-up should be integrated into the medical follow-up.

## CONCLUSION

Within the limitations of the study, children report for the first dental visit most commonly only after 7 years, and for complaints such as

tooth decay and tooth pain. Children make their first dental visit too late in relation to medical recommendations (between 6 and 12 months of life). Parents sought dental care for their children, mainly for curative reasons, and the most predominant reason for the first dental visit was dental caries. The results of this study indicate that bad oral health, making their first dental visit too late, and low health awareness of parents and guardians.

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