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Age and Reasons for First Dental Visit Among Children in Lagos, Nigeria

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Abstract

Background: An early first dental clinic appointment offers the prospect of prompt preventative care and parental education regarding the oral health of the child. The evidence-based recommendation by dental professionals all over the world is that a child should visit a dentist before or by 1 year of age. **Aim:** This study aimed to determine the chronological age at and the purpose for a first dental clinic visit amongst children aged 16 years and below attending the Paediatric Dental Clinic at the Lagos University Teaching Hospital (LUTH). **Materials and Methods:** This was a retrospective study conducted amongst children who attended the Paediatric Dental Clinic at the LUTH between January 2017 and December 2018. Data on age at first dental visit, reasons for attending and other information relevant to the study were collected. Descriptive statistics and Chi-square analysis were conducted, and the level of significance was set at $P < 0.05$. **Results:** A total of 1157 children were studied, comprising 580 (50.5%) males and 577 (49.9%) females. Their mean age on their first dental visit was 7.9 ± 3.7 years. Most of the children (31.4%) had their first dental visits at 7 and 9 years, and 0.8% of the children had their first dental visit below the age of 1 year. The most common reason for visiting the dental clinic was dental pain (33.1%). A higher proportion of the children (911 [79.0%]) had their first dental visit for therapeutic purposes, whereas 246 (21.0%) children visited the dental clinic for preventive care. Sex and age at first dental visit were statistically significantly associated with the reason for attendance ($P < 0.001$). **Conclusion:** Most children had their first dental visit between the ages of 7 and 9 years, mainly because of pain. It is necessary to create more awareness among parents/caregivers and to establish the concept of dental home.

Keywords: Age, children, first dental visit, reasons

INTRODUCTION

Early dental visits are essential preventive practices for young children. These visits enable dental professionals to detect early childhood caries (ECC), assess dental development, guide and motivate parents and caregivers on proper oral hygiene for the child, provide dietary counselling, give information on the risk and emergency management of traumatic dental injuries and motivate parents towards espousing preventive behaviours.^[1-4] 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.^[1,2] 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.^[5-7] 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.^[8-10]

Numerous researchers opine that the age of a child's first dental visit is vital in influencing paediatric oral health.^[11-16] It has been reported that earlier dental visits are associated with decreased incidence of dental caries and consequently, decreased oral health expenditures.^[17,18] Children who had their initial dental visit at 4 years of age or older had mean decayed, missing and filled teeth scores twice that of children younger than age 4 when they were seen.^[17] Bhaskar *et al.*,^[19]

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in a systematic review, determined that early preventive dental visits during the 1st years of life is correlated with reduced need for restorative dental care and lower expenditures for oral care.

There is no universal consensus on the age of the child at first dental visit. While some authors agree that the age of a child's first dental visit should be by the age of 1 year,^[12-14] others recommend 12–18 months as the optimal age range for the first visit.^[15,16] Current consensus among international paediatric dental guidelines recommends that a child should have a first visit within 6 months of the eruption of the first primary tooth and not beyond 12 months from the time when the first tooth erupts (approximately 6 months old).^[2,8,10,20,21]

The early establishment of dental home is encouraged at the first dental visit when the child is 1 year old, to aid in early implementation of preventive and interceptive measures for dental diseases and to promote paediatric oral health.^[8] Early paediatric dental attendance is positively influenced if parents knew the benefits of taking the child to the dentist by the age of 1 year. The American Academy of Pediatric Dentistry's (AAPD) policy on the dental home states, 'The AAPD encourages parents and caregivers to enable each child to establish a dental home by 12 months of age'.^[22] 'Dental home is the continuing relationship between the dentist who is the key dental care provider and the patient, and it encompasses comprehensive oral healthcare, beginning no later than age one'.^[22] The goals of this early visit are to establish a dental home for the infant, prevent ECC and introduce healthy habits that can be sustained. This visit should include an oral examination, risk assessment and anticipatory guidance.^[23,24]

ECC is a highly prevalent chronic condition among Nigerian children, specifically those with unmet healthcare needs and low socioeconomic status. The prevalence of dental caries among Nigerian children is of epidemic proportions and ranges between 11.2% and 48.0% across the country.^[25,26] Moreover, the high level of untreated caries in children is alarming, with values above 80% in all parts of Nigeria.^[25] While the need for dental treatment among Nigerian children is high, there is low and delayed utilisation of dental services until oral symptoms such as pain appear and persist.^[25,26] This observed oral health profile of the Nigerian child is determined by many factors, and the most important of them include the lack of a useful model of dental healthcare aimed at preventive treatment and the low awareness of healthy behaviour among parents.^[25,27]

One likely explanation for the rise in the prevalence of dental caries in the deciduous dentition and poor dental health among the paediatric population in Nigeria is a delay in the first visit of the child to the dentist.^[25,26] Appraising the most predominant reasons for children's first dental visits and the age at which it occurs is necessary for the planning of future public awareness programmes. There is a lack of data on the age at and reasons for a first dental visit among Nigerian paediatric population. We hypothesise that the age at first dental visit among our study population is not in line with that recommended by the AAPD, and that more than half of the population would not have had

their first dental visit by the age of 1 year. Therefore, our study aimed to determine the age at and reasons for the first dental visit among children attending the paediatric dental clinic at the Lagos University Teaching Hospital (LUTH).

Ethical approval

The research protocol obtained approval from the LUTH's Health Research and Ethics Committee at Idi-Araba, Lagos, Nigeria, on 20 March 2019 (Protocol Number: ADM/DCST/HREC/APP/2760). Adequate consideration was given to protect the identity of the study participants, and the confidentiality of the information given was guaranteed.

Study area and population

The study area was the Paediatric Dental Clinic of LUTH, Lagos, Nigeria. Lagos, which is one of the 36 states of Nigeria, was the former federal capital territory and is located in the southwestern geopolitical zone. LUTH is one of the largest federal government-owned tertiary hospitals in Nigeria. Patients with diverse ethnicities, languages, cultures and religions from Lagos, and its environs are usually referred to LUTH. The study included newborns to those aged 16 years who attended the Paediatric Dental Clinic.

Study design

This was a retrospective descriptive study whereby dental records from the case notes of 1551 children who met the inclusion criteria and attended the Paediatric Dental Clinic for the first time between January 2017 and December 2018 were obtained.

Sample size determination

The sample size was determined using a formula for descriptive cross-sectional study. Sample size = $Z^2 pq/e^2$, where $Z = 1.96$, $P =$ with 21.2% prevalence of caries among children attending a tertiary hospital in Lagos,^[27] $q = 1 - p$, with e set at 5% margin of error. The minimum calculated sample size was 256.

Study procedure

Only children making their first dental visits were included in the study. Any record with incomplete information on the age at first dental visit, the gender of child and reason for child's first dental visit was excluded. Children who had visited other dental clinics were also excluded. A clinical pro forma was designed to record data retrieved from the case records of the children. Variables extracted included age at first dental visit, sex and reason for the visit. The reasons for the first dental visit were categorised as follows: (1) pain, (2) dental caries, (3) abscess/swelling, (4) trauma, (5) soft-tissue lesions, (6) check-up, (7) prophylaxis, (8) tooth discolouration/stains, (9) retained/unerupted teeth, (10) oral habits, (11) malocclusion, (12) dental anomalies and (13) mobile teeth.

Data analysis

Statistical analysis was done using IBM SPSS software (version 23.0; IBM Corporation, Armonk, NY, USA). Continuous data were presented as means with standard deviation, whereas categorical variables were presented as

frequencies and percentages. Chi-square and Fisher's exact tests were utilised to test associations between variables, and the level of significance was set at $P < 0.05$.

RESULTS

A total of 1551 children visited the Paediatric Dental Clinic for the first time between January 2017 and December 2018. Records of 1157 children were utilised, of which 580 (50.5%) were male and 577 (49.9%) were female. The mean age of the children at their first dental visit was 7.9 ± 3.7 years. Most (31.4%) of the children had their first dental visits between the ages of 7 and 9 years. About one-quarter (26.8%) of the children had their first dental visit between the ages of 4 and 6 years, followed by those who had their first dental visits between the ages of 10 and 12 years (18%) and 13 and 15 years (10.3%). A lesser percentage of children (2.8%) had their first dental visit at the age of 15 years and above, whereas only 0.8% had their first dental visit below the age of 1 year [Table 1].

The most common reason for attendance at the clinic was dental pain (33.1%, $n = 383$) followed by the need for oral prophylaxis (10.9%, $n = 126$) and dental trauma (10.5%, $n = 121$) [Figure 1]. A higher proportion (911 [79%]) of the children had their first dental visit for curative purposes, whereas less than half (246 [21%]) visited the dental clinic for preventive care.

Relationship between sex and reasons for first dental visit is shown in Table 2. There was a statistically significant relationship ($P = 0.002$) between sex and reasons for first dental visit. Pain (35.4%, $n = 204$), dental caries (11.8%, $n = 68$), prophylaxis (12.1% $n = 70$) and dental abscess (5.4%, $n = 31$) were more prevalent reasons for first dental visit seen in females than males. Trauma (11.9%, $n = 69$), malocclusion (10%, $n = 58$), routine dental check-up (11.7%, $n = 68$) and tooth discolouration (4%, $n = 23$) were significantly higher reasons for dental visit seen in males than females.

There was a statistically significant association between the age at first dental visit and reasons for attendance ($P < 0.001$). Majority of the children (56.6%) below the age of 1 year visited the dental clinic predominantly as a result of dental anomalies such as natal/neonatal teeth, whereas children between age 4 and 6 years (11.3%) had their first dental visit due to reasons such as retained primary teeth and delayed eruption. Traumatic dental injuries and dental abscess as reasons for first dental visit were highest among children aged 1–3 years (23.3% and 10.3%, respectively) [Table 3].

It is recommended that a child should have the earliest dental attendance within 6 months from the time of eruption of the first primary tooth and not beyond 12 months from the time when the first tooth erupts.^[8,9] The first dental visit at age 1 year gives a child the opportunity to have early preventive and interceptive care to address dental diseases and promote good oral health.^[1-3] This first visit is targeted towards the

Table 1: Distribution of children according to sex and age at first dental visit

Variable	Frequency, n (%)
Sex	
Female	577 (49.9)
Male	580 (50.1)
Total	1157 (100.0)
Age (years)	
<1	9 (0.8)
1-3	116 (10.0)
4-6	310 (26.8)
7-9	363 (32.4)
10-12	208 (18.0)
13-15	119 (10.3)
>15	32 (2.8)
Total	1157 (100.0)
Mean age	7.938±3.6750

Table 2: Association between sex and reason for first dental visit

	Sex, n (%)		P
	Female	Male	
Reasons			
Pain	204 (35.4)	179 (30.9)	0.002*
Caries	68 (11.8)	42 (7.2)	
Abscess/swelling	31 (5.4)	26 (4.5)	
Trauma	52 (9.0)	69 (11.9)	
Soft-tissue lesion	9 (1.6)	5 (0.9)	
Routine check-up	53 (9.2)	68 (11.7)	
Prophylaxis	70 (12.1)	56 (9.7)	
Discolouration/stains	10 (1.7)	23 (4.0)	
Retained/unerupted teeth	29 (5.0)	31 (5.3)	
Oral habit	3 (0.5)	1 (0.2)	
Malocclusion	38 (6.6)	58 (10.0)	
Dental anomaly	5 (0.9)	15 (2.6)	
Mobile tooth	5 (0.9)	7 (1.2)	
Purpose of visit			
Curative	455 (78.9)	456 (78.6)	0.922
Preventive purpose	122 (21.1)	124 (21.4)	

*Statistically significant

prevention of ECC; this includes detection and arrest of the spread of any emergent carious process. Early dental visit also allows educating parents/caregivers and motivating them about fluoride therapy and plaque control for children, educating them about teething emergency management of traumatic injuries to or facial tissues and identifying harmful oral habits and the relationship between nutrition and healthy dentition.^[9]

A total of 1157 children who visited the Paediatric Dental Clinic at the LUTH for the first time were analysed. The mean age of the study participants was 7.9 ± 3.7 years, and only 0.8% of them had visited the dentist before the age of 1 year. This finding is not in accordance with the AAPD recommendation; therefore, the present study fails to reject the hypothesis that

Table 3: Association between the age at first dental visit and reasons for visit

	Age (years), n (%)							P
	<1	1-3	4-6	7-9	10-12	13-15	>15	
Reasons								
Pain	0 (0.0)	16 (13.8)	100 (32.3)	129 (35.5)	73 (35.1)	49 (41.2)	16 (50.0)	<0.001*
Caries	0 (0.0)	11 (9.5)	34 (11.0)	32 (8.8)	15 (7.2)	15 (12.6)	3 (9.4)	
Abscess/swelling	0 (0.0)	12 (10.3)	13 (4.2)	15 (4.1)	10 (4.8)	5 (4.2)	2 (6.3)	
Trauma	0 (0.0)	27 (23.3)	30 (9.7)	36 (9.9)	16 (7.7)	12 (10.1)	0 (0.0)	
Soft-tissue lesion	1 (11.1)	4 (3.4)	5 (1.6)	2 (0.6)	1 (0.5)	1 (0.8)	0 (0.0)	
Routine check-up	2 (22.2)	22 (19.0)	46 (14.8)	37 (10.2)	9 (4.3)	4 (3.4)	1 (3.1)	
Prophylaxis	0 (0.0)	5 (4.3)	12 (3.9)	36 (9.9)	44 (21.2)	22 (18.5)	7 (21.9)	
Discolouration/stains	0 (0.0)	8 (6.9)	6 (1.9)	10 (2.8)	8 (3.8)	0 (0.0)	1 (3.1)	
Retained/unerupted teeth	1 (11.1)	3 (2.6)	35 (11.3)	16 (4.4)	2 (1.0)	2 (1.7)	1 (3.1)	
Oral habit	0 (0.0)	1 (0.9)	1 (0.3)	2 (0.6)	0 (0.0)	0 (0.0)	0 (0.0)	
Malocclusion	0 (0.0)	2 (1.7)	15 (4.8)	43 (11.8)	27 (13.0)	8 (6.7)	1 (3.1)	
Dental anomaly	5 (55.6)	5 (4.3)	6 (1.9)	2 (0.6)	2 (1.0)	0 (0.0)	0 (0.0)	
Mobile tooth	0 (0.0)	0 (0.0)	7 (2.3)	3 (0.8)	1 (0.5)	1 (0.8)	0 (0.0)	
Purpose of visit								
Curative	7 (77.8)	89 (76.7)	253 (81.6)	290 (79.9)	155 (74.5)	93 (78.2)	24 (75.0)	0.595
Preventive	2 (22.2)	27 (23.3)	57 (18.4)	73 (20.1)	53 (25.5)	26 (21.8)	8 (25.0)	

*Statistically significant

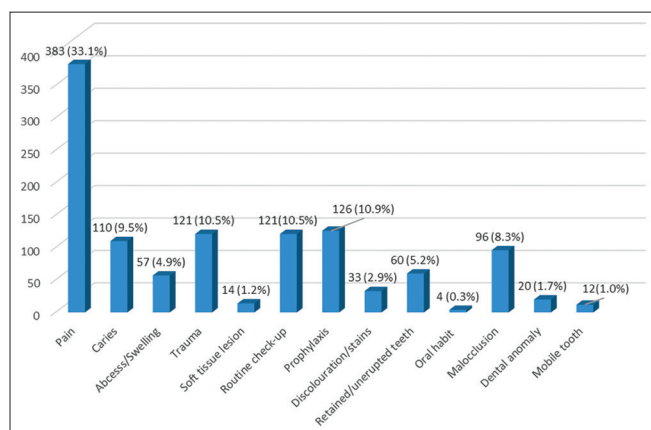


Figure 1: Reasons for first dental visit

more than half of the study population would not have had their first dental visit before the age of 1 year.

Majority of our study population had their first dental visit between 7 and 9 years; this finding is comparable to those reported in India and Nepal where they reported first dental visit among older age groups (7–9 years and 6–11 years, respectively).^[28,29] On the contrary, lower age groups were reported in Saudi Arabia (3–5 years),^[12] Bulgaria (3–6 years) and^[30] the USA (2–4 years).^[17] The mean age at the first dental visit in the present study was 7 years, which is in agreement with a similar study in India where the average age at which parents first sought dental care for their children was 7 years. It was, however, much higher than that reported in Poland and Lebanon, which was 3 and 4 years, respectively.^[14,31]

Despite current professional recommendations for the 1st-year dental visit, reports from different parts of the world indicate that very few children actually had such visits.^[12,14,17,28-31] In

our study, 0.8% of the children had their first dental visit by age 1 year. 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.^[14,16,26-30] Reports from Australia showed that most children do not see the dentist before starting pre-school i.e., about 5 years of age.^[32] In the USA, Slayton *et al.*^[33] reported that only 2% of children under the age of 3 visit the dentist during their 1st year of life.^[33] Similar figures are available for Bulgarian children^[30] where 1.7% had their first dental visit before the age of 1 year, whereas 5.3% of Brazilian children had their first dental visit before 1 year of age.^[34] Furthermore, similar studies carried out in India and Nepal showed that 4.7% and 7.9% of children, respectively, had their first dental visit at age 3 years and below.^[28,29]

One of the reasons for delaying before the child’s first dental visit as observed in our study may be the misconception of parents that they do not need to take their children to the dentist unless there are problems.^[35] Other reasons for late presentation at the clinic could be financial constraints, poor knowledge and lack of awareness among parents regarding the ideal age for a child’s first dental visit and the significance of the primary dentition and its role in the general health and wellness of a child.^[35-38]

The present study showed that pain was the most predominant reason for the first dental visit; this result corroborates findings from similar studies.^[12,28,29,39] On the contrary, Mileva and Kondeva^[30] in their study of Bulgarian children reported caries (59.8%) as the predominant reason for a child’s first dental visit followed by pain (16.2%), corroborating the findings reported in Lebanon where 50.9% of the children presented at the dental clinic for the first time due to caries

and 29.5% presented due to pain.^[14] Pain being the most predominant reason for attendance in the study population clearly shows delayed/problem-initiated presentations, attributable to lack of knowledge of the aetiology and progression of oral diseases, especially dental caries. The general attitude of most parents/caregivers towards the primary dentition is poor, as most parents perceive the primary teeth to be temporary and therefore, do not need treatment unless there is pain.^[12,35,40] Dental caries is often seen as stains which need cleaning, rather than infection which can lead to pain, abscess and early loss of teeth.^[41] It is interesting to note that children's complaints of pain does not always guarantee dental visitation as the care of primary teeth is not seen to be important.^[41]

Our study also showed that most (79%) of the children had their first dental visit for therapeutic purposes, whereas less than half (21%) visited for preventive care. The pattern of dental care-seeking behaviour observed in the study population seems problem initiated rather than driven by primary prevention. This situation needs to be addressed and reversed especially with the increasing prevalence of caries in the primary teeth of Nigerian children.^[26] A previous Nigerian study reported that most children (64.3%) lost their teeth as a result of caries which is preventable.^[42] Bhaskar *et al.* in a systematic review concluded that early preventive dental visits are associated with more subsequent preventive dental visits and may be associated with reduced restorative dental care visits and related expenditures during the 1st years of life.^[19] According to Benjamin Franklin's theory and philosophy, 'an ounce of prevention is superior to a pound of cure'.^[19] It is documented that most children would have visited a physician than the dentist during the first 3 years of life for preventive care.^[43,44] There is a need to create awareness among parents/caregivers, physicians and other allied non-dental professionals on the importance of the first dental visit at age 1.

The limitation of the present study includes convenient data collected from patient's records. Future randomised population-based studies that will include parents/caregiver's perception of a child's first dental visit are recommended. There is a need to increase oral health awareness among parents/caregivers and non-dental healthcare professionals on the prevention of oral diseases with emphasis on the importance of the first dental visit at age 1. There is a need to establish the concept of dental home among Nigerian paediatric population.

CONCLUSION

The study showed that most children had their first dental visit between the age of 7 and 9 years, which is not in line with the recommended age of 1 year. Parents sought dental care for their children, mainly for curative reasons, and the most predominant reason for the first dental visit was dental pain.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

- Hale K, Shah S. An infant's first dental visit: When, why, and how. *J Mich Dent Assoc* 2001;83:28-31.
- Poulsen S. The child's first dental visit. *Int J Paediatr Dent* 2003;13:264-5.
- Ramos-Gomez F, Jue B, Bonta CY. Implementing an infant oral care program. *J Calif Dent Assoc* 2002;30:752-61.
- Grzesiak I, Kaczmarek U. The child's first dental visit. *Dent Med Probl* 2006;43:433-7.
- Casamassimo PS, Warren JJ. Examination, diagnosis, and treatment planning of the infant and toddler. In: Pinkham JR, editor. *Paediatric Dentistry Infancy: Through Adolescence*. 4th ed.. New York: Elsevier Inc.; 2005. p. 206-19.
- Kaczmarek U. Behavioural methods that shape child's demeanour in the dental office – Review of literature. *J Stoma* 2009;62:456-66.
- Wilk-Sieczak B, Zakrzewski M, Chmielewska-Luczak D. Mother's dental fear and the reasons for their preschool children's first dental visit as the predictors of their negative attitude towards the dental treatment. *Dent Med Probl* 2005;42:77-82.
- American Academy of Pediatric Dentistry: Guideline on infant oral health care. *Pediatr Dent* 2014;36:1141-5.
- Hale KJ; American Academy of Pediatrics Section on Pediatric Dentistry. Oral health risk assessment timing and establishment of the dental home. *Pediatrics* 2003;111:1113-6.
- Edelstein BL. The age one dental visit: Information on the web. *Pediatr Dent* 2000;22:163-4.
- Olatosi OO, Iwuala SO, Ojewola RW, Chukwudifu N, Oredugba FA, Sote EO. Undergraduate medical students' knowledge and attitude on early childhood caries and infant oral health. *J Pediatr Dent* 2016;4:8-13.
- Murshid EZ. Children's ages and reasons for receiving their first dental visit in a Saudi community. *Saudi Dent J* 2016;28:142-7.
- Alshahrani NF, Alshahrani AN, Alahmari MA, Almanie AM, Alosbi AM, Togoo RA. First dental visit: Age, reason, and experiences of Saudi children. *Eur J Dent* 2018;12:579-84.
- Daou MH, Eden E, El Osta N. Age and reasons of the first dental visit of children in Lebanon. *J Med Liban* 2016;64:18-22.
- Adamowicz-Klepalska B. Caries prevention at children. *Pediatr Pol* 2009;84:511-6.
- Marcinkowska U, Piekarz T, Mosler B, Michalak E, Joško-Ochojska J. Some elements of caries prevention among children at kindergarten age. II. Institutional prevention. *Dent Med Probl* 2013b; 50:52-6.
- Nainar SM, Straffon LH. Targeting of the year one dental visit for United States children. *Int J Paediatr Dent* 2003;13:258-63.
- Savage MF, Lee JY, Vann WF Jr. Early preventive dental visits: Effects on subsequent utilization and cost. *Pediatr Dent* 2003;2:181-2.
- Bhaskar V, McGraw KA, Divaris K. The importance of preventive dental visits from a young age: Systematic review and current perspectives. *Clin Cosmet Investig Dent* 2014;6:21-7.
- American Dental Association. Statement on Early Childhood Caries; 2000. Available from: <http://www.ada.org/en/about-the-ada/ada-positions-policies-and-statements/statement-on-early-childhood-caries>. [Last accessed on 2018 Aug 24].
- American Academy on Pediatric Dentistry Clinical Affairs Committee, American Academy on Pediatric Dentistry Council on Clinical Affairs. Guideline on periodicity of examination, preventive dental services, anticipatory guidance/counseling, and oral treatment for infants, children, and adolescents. *Pediatr Dent* 2008;30:112-8.
- American Academy of Pediatric Dentistry. Policy on the dental home. *Pediatr Dent* 2006;28:17-8.
- Croll TP. A child's first dental visit: A protocol. *Quintessence Int Dent Dig* 1984;15:625-37.
- Nowak AJ, Warren JJ. Infant oral health and oral habits. *Pediatr Clin North Am* 2000;47:1043-66, vi.
- Folayan MO, Chukwumah NM, Onyejaka N, Adeniyi AA, Olatosi OO. Appraisal of the national response to the caries epidemic in children in Nigeria. *BMC Oral Health* 2014;14:76.
- Sofola OO, Folayan MO, Oginni AB. Changes in the prevalence of dental caries in primary school children in Lagos state, Nigeria. *Niger J Clin Pract* 2014;17:127-33.
- Olatosi OO, Inem V, Sofola OO, Prakash P, Sote EO. The prevalence of early childhood caries and its associated risk factors among preschool

- children referred to a tertiary care institution. Niger J Clin Pract 2015;18:493-501.
28. Dave B, Patel R, Bargale S, Deshpande A, Shah V, Chawda G. 1st Dental Visit: An ounce of prevention is worth a pound of cure. Int J Oral Health Med Res 2018;5:4-7.
 29. Ghimire N, Kayastha B, Nepal P. The first dental visit. J Chitwan Med Coll 2014;3:30-3.
 30. Mileva SP, Kondeva VK. Age at and reasons for the first dental visit. Folia Med (Plovdiv) 2010;52:56-61.
 31. Nino J, Ashino J, Varsha J, Aswathy K, Rupesh S. First dental visit of a child: A retrospective study. Pushpagiri Med J 2010;2:21-3.
 32. Widmer R. The first dental visit: An Australian perspective. Int J Paediatr Dent 2003;13:270.
 33. Slayton RL, Warren JJ, Levy SM, Kanellis MJ, Islam M. Frequency of reported dental visits and professional fluoride applications in a cohort of children followed from birth to age 3 years. Pediatr Dent 2002;24:64-8.
 34. Hartwig A, Azevedo M, Romano A, Cenci M. Prevalence and disparities in the first dental visit of preschool children aged 1218 months in southern Brazil. RFO 2018;23:31-36. Available from: <http://seer.upf.br/index.php/rfo/article/view/7847>. [Last accessed on 2019 Apr 9].
 35. Hussein AS, Abu-Hassan MI, Schroth RJ, Aghareed MG. Parents perception on the importance of their children's first dental visit (A cross-sectional pilot study in Malaysia). J Oral Res 2013;1:17-25.
 36. Farid H, Khan FR, Aman N. Knowledge, attitude and practice of mothers regarding their own and children's dental health – A tertiary care hospital based study. J Ayub Med Coll Abbottabad 2013;25:35-7.
 37. Baghdadi ZD. Improving oral health status of children in Tabuk, Saudi Arabia. Dent J 2014;2:22-40.
 38. Oredugba F, Agbaje M, Ayedun O, Onajole A. Assessment of mothers' oral health knowledge: Towards oral health promotion for infants and children. Health 2014;6:908-15.
 39. Meera R, Muthu MS, Phanibabu M, Ratnaprabhu V. First dental visit of a child. J Indian Soc Pedod Prev Dent 2008;26:68-71.
 40. Manna A, Carlen A, Lingstrom P. Dental caries and associated factors in mothers and their preschool and school children: a cross-sectional study. J Dent Sci 2013;8:101-8.
 41. Horton S, Barker JC. Rural Mexican immigrant parents' interpretation of children's dental symptoms and decisions to seek treatment. Community Dent Health 2009;26:216-21.
 42. Olatosi OO, Sote EO. Causes and pattern of tooth loss in children and adolescents in a Nigerian tertiary hospital. Nig Q J Hosp Med 2012;22:258-62.
 43. Kranz AM, Preisser JS, Rozier RG. Effects of physician-based preventive oral health services on dental caries. Pediatrics 2015;136:107-14.
 44. Olatosi OO, Sote EO, Akinsola OJ, Oredugba FA, Adenaike AS. Prevention of dental caries: Knowledge, practice and opinion of paediatricians in Lagos. West Afr J Med 2013;32:52-6.