



(RESEARCH ARTICLE)



Age and reason of first visit among children seen at the paediatric dental unit of the Lagos state university teaching hospital

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Abstract

Background: A child's first dental visit gives parents an opportunity to get guidance regarding their child's oral hygiene, dietary practices, oral habits and prevention of traumatic injuries and oral diseases. It also provides an opportunity for parents to address their concerns and questions regarding their child's oral care.

Aim: To determine the age and the purpose of first visit among children seen at the paediatric dental clinic of Lagos State University Teaching Hospital.

Methodology: This is a retrospective study where the dental records of children between the age of 0 and 16 years were reviewed from January 2018 till May 2022. Statistical analysis was done using IBM SPSS software (version 23.0; IBM Corporation, Armonk, NY, USA). Continuous data are presented as means with standard deviation, whereas categorical variables are presented as frequencies and percentages. Descriptive statistics and Chi-square analysis were conducted, and the level of significance was set at $P < 0.05$.

Results: Four hundred and ten children were seen, during the period under review. There were 199 (48.5%) males and 211 (51.5%) females. The major reason for presentation was dental caries (47.1%). Majority (31.5%) of those who presented during this period were aged 7 – 9 years. Children with special health care needs constituted about 2% of the population.

Conclusion: Dental clinic presentations in our environment are more associated with curative rather than preventive visits. More females were seen at the dental clinic compared to males. The main reason for presentation at the dental clinic was dental caries.

Keywords: Age; Reasons; First dental visit; First dental appointment; Dental home

1. Introduction

Oral health is an important part of a child's overall well-being. [1] Establishing good oral health throughout infancy and early childhood sets the foundation for a lifetime of good dental health thus the importance of a child's age at first dental visit. [2]

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A child's first dental visit is the first time a child visits a dental clinic. The American Academy of Pediatric Dentistry (AAPD) and the American Dental Association (ADA) establish among other recommendations that a child should visit the dentist within six months of eruption of the first primary tooth and no later than 12 months of age. [3, 4] Also, AAPD encourages parents and caregivers to enable each child to establish a dental home by 12 months of age. [5] This 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. [5]

The age at which a child receives dental care for the first time, and the reason for such dental visitation depends on factors such as socioeconomic status, level of education, and past dental experience of child's parent/guardian as well as societal factors. [6]

The purpose of this early visit is not only to assess child's dentition, but to help the child get familiar with the dental environment thereby reducing dental anxiety. [7] It gives parents an opportunity to get guidance regarding their children's oral hygiene, dietary practices, oral habits and prevention of oral diseases and traumatic injuries. It also provides an opportunity for parents to address their concerns and questions regarding their children's oral care. [8] After the first visit, the dentist recommends a schedule based on the child's needs and disease susceptibility.

The reason for a child's first dental visit in most undeveloped countries is pain. [6] In a study carried out in Poland [9], pain (33.1%) and dental caries (26.9%) were the most common reasons for the first visit, whereas check-up and prevention (47.4%), followed by tooth injury (19.7%) and carious lesions (13.3%) were the most common reasons in another study. [10] In a study done by Olatosi et al, parents sought dental care for their children, mainly for curative reasons, and the most predominant reason for the first dental visit was dental pain. [11]

Many studies have shown low awareness level among the parents regarding the early visit of a child to dentist. [9, 12, 13] Researchers have found that parents bring their child to the dentist only when there is a problem and in very late stage, when the diseases are very severe. It has been reported that earlier dental visits are associated with decreased incidence of dental caries and consequently, decreased oral health expenditures. [14]

The issue of first dental visits aims to shift public perspective from awareness of just the curative aspect of oral healthcare to awareness of its preventive aspects as well. Despite the AAPD recommendation, studies have shown that parents do not bring their children to the dentist at the recommended age. [15, 16] There has been a few research on the reason and age at first dental visit, however, there is still a lack of data among Nigerian paediatric population. As regards Lagos State University Teaching Hospital, paediatric dental unit, there has been no appraisal of the reasons for children's first visit to the clinic and at what age. The aim of this study therefore was to determine the age and reason of first visit among children seen at the paediatric dental clinic of LASUTH.

2. Material and method

This was a retrospective study carried out amongst children who attended the Paediatric dental clinic, Lagos State University Teaching Hospital. The dental records of children between the age of 0 and 16 years who visited the clinic between January 2019 and May 2022 were reviewed. A total of 410 case records were evaluated.

The study included the data on age at first dental visit, reasons for visit and other information relevant to the study and those with incomplete data were excluded. The reason for dental visit were categorized into the following: Routine check-up, Dental caries, Pain, Swelling/abscess, Trauma, Mobile teeth, Bleeding gums/bad breath/deposit/stains, Discolored teeth, Retained or missing teeth/dental anomaly, Malocclusion, others, which included soft tissue lesion, cleft lip/palate, bone pathology.

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. Descriptive statistics and Chi-square analysis were conducted, and the level of significance was set at $P < 0.05$.

3. Results

Four hundred and ten children between ages 0 and 16 years were seen, according to records, during the period under review. There were 199 (48.5%) males and 211 (51.5%) females. The mean age of the children in this study was 7.3 ± 3.37 years. (Table 1)

The major reason for presentation was dental caries (47.1%). This was followed by dental trauma (12.9%) and soft tissue lesions (12.0%). The least reason for presentation included special needs (0.2%), bruxism (0.2%), broken denture (0.2%), space maintainer (0.2%), routine check-up (1.7%). (**Table 2**)

The ratio of male to female was 1:1.06. Majority of those who came because of dental trauma (8.5%) were male while those of dental caries (26.6%) were female. More female (5.1%) presented because malocclusion than male (3.7%). This is also the same with discoloration where 1.5% of those who presented were female while 1.0% were male. The only patient that presented bruxism was a female while the only one who presented because of a broken denture was a male. All these were statistically significant with significant value being 0.01. (**Table 2**)

Majority (31.5%) of those who presented during this period were aged 7 – 9 years closely followed by those aged 4 – 6 years. The least of those who presented this period were those less than 1 year old. This is statistically significant. Highest dental trauma presentation occurred in ages 1 – 3 years, 7 – 9 years, 10 – 12 years. Highest caries presentation is age 7 – 9 years these were statistically significant with significant value being 0.00. (**Table 3**)

Majority (**41.2%**) of the children had their mothers as their informants while fathers presented as informants in **11.8%**. The least utilized informants include the children themselves (**2.7%**), aunts (**1.0%**), grandmothers (**0.5%**) and sisters (**0.5%**). We had no response in about 176 cases because informant was not recorded at the time of presentation. There were a few cases of multiple reasons and informants. (**Table 4**)

Children with special health care needs constituted about 2% of those that presented within the period under study. These children include those with autism, epilepsy, cerebral palsy and sickle cell disease. (**Table 5**)

Table 1 Distribution of the children according to gender and age groups

Variables	Frequency (n = 410)	Percentage % (n = 100)
Gender		
Male	199	48.5
Female	211	51.5
Age (years)		
<1	11	2.7
1 – 3	44	10.7
4 – 6	114	27.8
7 – 9	129	31.5
10 – 12	83	20.2
13 – 15	29	7.1
Mean Age	7.3 ± 3.37	

Table 2 Association between Gender and Reasons for visit

Reasons/ Gender	Female n (%)	Male n (%)	Total n (%)
Discoloration	6 (1.5)	4 (1.0)*	10 (2.5)
Soft tissues	28 (6.8)	21 (5.1)	49 (12.0)
Dental Caries	109 (26.6)	84 (20.5)	193 (47.1)
Dental Anomalies	5 (1.2)	8 (2.0)	13 (3.2)

Trauma	18 (4.4)	35 (8.5)	53 (12.9)
Broken Denture	0 (0.0)*	1 (0.2)*	1 (0.2)*
Bruxism	1(0.2)*	0 (0.0)*	1 (0.2)*
Malocclusion	21 (5.1)	15 (3.7)	36 (8.8)
Mobile tooth	2 (0.5)*	11 (2.7)	13 (3.2)
Retained Tooth	18 (4.4)	12 (2.9)	30 (7.3)
Check-up	2 (0.5)*	5 (1.2)	7 (1.7)
Space Maintainer	1(0.2)*	2 (0.5)*	3 (0.7)*
Special Needs	0 (0.0)*	1(0.2)*	1(0.2)*
Total	211 (51.5)	199 (48.5)	100 (100.0)
P value		25.5	
χ^2		0.01	

*Fisher's Exact

Table 3 Association between Age and Reasons for visit

Reasons/ Age	<1 n (%)	1 - 3 n (%)	4 - 6 n (%)	7 - 9 n (%)	10 - 12 n (%)	13 - 15 n (%)	Total n (%)
Discoloration	0(0.0)*	5(1.2)	3(0.3)*	0(0.0)*	2(0.5)*	0(0.0)*	10(2.4)
Soft tissues	8(2.0)	6(1.5)	9(2.2)	11(2.7)	13(3.2)	2(0.5)	49(12.0)
Dental Caries	0(0.0)*	17(4.1)	45(11.0)	76(18.5)	37(9.0)	18(4.4)	193(47.1)
Dental Anomalies	1(0.2)*	0(0.0)*	4(1.0)*	5(1.2)	2(0.5)	1(0.2)	13(3.2)
Trauma	1(0.2)*	14(3.4)	14(3.4)	8(2.0)	13(3.2)	3(0.7)*	53(12.9)
Broken Denture	0(0.0)*	0(0.0)*	0(0.0)*	0(0.0)*	1(0.2)*	0(0.0)*	1(0.2)*
Bruxism	0(0.0)*	0(0.0)*	1(0.2)*	0(0.0)*	0(0.0)*	0(0.0)*	1(0.2)*
Malocclusion	1(0.2)*	0(0.0)*	19(4.6)	10(2.4)	6(1.5)	0(0.0)*	36(8.8)
Mobile tooth	0(0.0)*	1(0.2)*	5(1.2)	1(0.2)*	3(0.7)*	3(0.7)*	13(3.2)
Retained Tooth	0(0.0)*	0(0.0)*	12(2.9)	12(2.9)	5(1.2)	1(0.2)*	30(7.3)
Check-up	0(0.0)*	1(0.2)*	2(0.5)*	3(0.7)*	1(0.2)*	0(0.0)*	7(1.7)
Space Maintainer	0(0.0)*	0(0.0)*	0(0.0)*	3(0.7)*	0(0.0)*	0(0.0)*	3(0.7)*
Special Needs	0(0.0)*	0(0.0)*	0(0.0)*	0(0.0)*	0(0.0)*	1(0.2)*	1(0.2)*
Total	11(2.7)	44(10.7)	114(27.8)	129(31.5)	83(20.2)	29(7.1)	410(100.0)
P value				147.5			
χ^2				0.00			

*Fisher's Exact

Table 4 Distribution of Informant/Parent

Informant/Parent	Frequency (n)	Second informant (n)	Total (n)	Percentage (%)
No response	177	-	177	42.4
Aunt	4	-	4	1.0
Child	7	4	11	2.7
Father	47	2	49	11.8
Grandmother	2	-	2	0.5
Mother	171	-	171	41.2
Sister	2	-	2	0.5
Total	410	6	416	100.0

Table 5 Distribution of Special Needs children

Special needs	Frequency (n)	Percentage (%)
No	402	98.0
Yes	8	2.0
Total	410	100.0

4. Discussion

Early dental visit provides an opportunity for the assessment of the dentition and to introduce the child into the dental environment, helping to instill a positive oral health attitude. [7] Moreover, it affords an avenue for parental education and interactions on their children's oral health. [8]

In this present study, more females were seen at the dental clinic compared to males within the same period of time. This is in agreement with the reports of the study carried out by Murshid in a Saudi community where the number of females (50.2%) who attended the dental clinic for the first time in the two locations used in that community were slightly higher than that of the males (49.8%) [6] This may be an indication that females tend to express their pain earlier compared to male, and are also more positive toward their oral health relative to males, [15] since pain was one of the major reasons for presentation in different dental clinics in developing countries and in this present study. [6, 9, 10] However, this is different from the findings of Dave et al in 2019, where more males (58.9%) attended dental clinics than females (41.1%). [12]

The main reason for visit to the dental clinic was dental caries. This is in agreement with a study by Daou et al carried out in a private paedodontic office in Lebanon. [16] It also corroborates the findings of Mileva and Kondeva among Bulgarian children. [18] However, it is different from the report of Olatosi et al where pain was the main reason of presentation in the dental clinic. [11] This finding was not comparable because pain could have been as a result of different dental conditions including dental caries, trauma, mobile teeth and soft tissue lesions e.g. gingivitis or periodontal problems.

The highest age group that visited the dental clinic were 7 – 9 years. This is also in line with findings of some previous studies. [11, 12, 13] This is contrary to the observations of Murshid [6] in Saudi Arabia where a younger age group (3 – 5 years) had the highest rate of first visit and Meera et al [19] where age of first visit was between 6 and 12 years. Although, it is recommended that a child should visit the dental clinic within six months of the first tooth eruption or by the first year of life [5], what is practically established in most research work from different parts of the world is that most children are brought to the clinic in later childhood and for therapeutic reasons rather than preventive. [12]

Taking it further, some researchers even recommended that the first visit should be as early as the fourth month intrauterine life.[12, 19, 20] AAPD has also recommended that health workers who attend to expectant mothers should be aware of the importance of mother's oral health to that of the unborn child and should encourage expectant mothers on the need to establish a dental home during pregnancy.[21] It is believed that this will enable the dentist to explain to the expectant mother what to expect at each stage of development of the child, and to educate her accordingly on prenatal effects of diet and other medical conditions on the developing dentition of the unborn child.[13]

Over 98% of the children in this present study visited the dental clinic for curative or corrective purposes. This is even higher than the previous Nigerian study carried out in Lagos. [11] Only 1.7% subjects in this study presented for preventive purposes. This higher value could be because in the study location, LASUTH, the children are first attended to at the Oral Diagnosis clinic where most preventive treatments are carried out before referral to the Paediatric dental clinic where mostly curative, surgical and corrective treatments are done. According to Dave et al, this higher value is also common in developing countries because individuals are responsible for their own dental treatment which is different from what obtains in developed countries where they are encouraged to attend regular dental visits usually included in their insurance packages.[12] Some of the preventive goals that can be achieved during this early first visits include, but not limited to, oral hygiene improvements, discontinuation of oral habits and prevention of traumatic dental injuries. [19]

Children with special health care needs constituted just about 2% of those that presented within the period under study. This shows that the society is yet to see the importance of taking children with special health care needs to the dental clinic for regular check-up. This is especially important because of the tendencies of these children to develop dental diseases like caries and the difficulty encountered by dental practitioners in managing them properly. It was reported in the survey by Lewis [22] and his team that there were many unmet dental needs among these special children. They recommended that there should be a well-staffed referral centre where the oral health care of these special children can be comprehensively met. [22]

5. Conclusion

Dental clinic presentations in our environment are more associated with curative rather than preventive visits. These visits occur mainly when the children are in the mixed dentition stage with dental caries being the main reason for their first clinic presentation.

Compliance with ethical standards

Acknowledgments

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Disclosure of conflict of interest

No conflict of interest to disclose.

Statement of ethical approval

Ethical approval was obtained from the ethical board of the Lagos State University Teaching Hospital.

Statement of informed consent

This was a retrospective study, looking into the records of patients who had presented in the paediatric dental clinic in the past. There were no human subjects to obtain consent from.

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