

An Analysis of the Practice of Accompanying Paediatric Patients for Dental Treatment in Kano, Nigeria

Chizoba Chineme Okolo¹, Yewande Isabella Adeyemo¹, Chikaodi O. Oguchi¹, Abdulrahman B. Malami¹, Olubukola Olamide Olatosi², Folakemi Oredugba²

¹Department of Child Dental Health, Faculty of Dentistry, Bayero University Kano, Kano, ²Department of Child Dental Health, Faculty of Dental Sciences, College of Medicine, University of Lagos, Lagos, Nigeria

Abstract

Background: Children rely on an accompanying adult to access and get consent for their medical care. Parents usually serve as the accompanying adults; however, there are situations when they must delegate that duty. **Aim:** This study aimed to analyze the practice of accompanying children for dental treatment in northern Nigeria and describe the circumstances surrounding their visit for dental treatment. **Materials and Methods:** This was a retrospective study of all new patients (and their accompanying adults) who visited the paediatric dentistry clinic at Aminu Kano Teaching Hospital in Kano between January 2017 and June 2020. Descriptive statistics were presented using means, standard deviations, percentages, and frequencies. Bivariate (Chi-square test), multivariate analysis, and two-way analysis of variance were performed to determine the associations between the dependent and independent variables. The level of statistical significance was set at $P < 0.05$. **Results:** Data from 1656 children were analyzed. 46.6% ($n = 770$) of the children were female. Majority of the children (66.1%) were accompanied by their mothers and most (69.5%, $n = 1151$) of the accompanying adults were female. Fathers mostly accompanied the male children: this finding was statistically significant ($P = 0.001$). The proportion of children accompanied by their mothers was much higher among the younger children ($P < 0.001$). **Conclusion:** In Kano, parents most frequently accompanied pediatric patients to dental appointments. Mothers were the most common companions for very young children as well as female children. The health-seeking behaviour in northern Nigeria appears to be influenced by culture and religion.

Keywords: 1st dental visit, accompanying adult, pediatric dentistry

INTRODUCTION

Children under the age of 18 years in Nigeria are required to have an accompanying adult to access and consent to medical and dental care because the legal age of consent for health care is 18.^[1] When either parent is present as the child's accompanying adult, he/she can provide the clinician with accurate and relevant clinical information, make out-of-pocket payments for clinical services and give consent to the treatment plan.^[2] The likelihood of adhering to postoperative instructions and keeping future appointments also increases when the accompanying adult is a parent.^[2]

Although the presence of a parent brings psychological and emotional benefits to the child, there are occasions when it becomes necessary for the parent to assign another adult to be the child's companion at the clinic.^[2] The law states that such delegation does not automatically imply consent to treat; hence, it is best practice to ascertain the scope of the delegated authority before the start of treatment.^[3]

The Aminu Kano Teaching Hospital (AKTH) is a public tertiary hospital in Kano state, northern Nigeria, that serves as a referral center to the region and neighboring countries.^[4] It provides a comprehensive range of medical and surgical services for adults and children including paediatric dentistry. In 2017, the hospital's management hired a specialist pediatric dentist and moved the paediatric dentistry clinic to a more functional location that included a health records department. Annually, the clinic caters for approximately 2000 new and returning patients.

Address for correspondence: Dr. Chikaodi O. Oguchi,
Department of Child Dental Health, Faculty of Dentistry,
Bayero University Kano, Kano, Nigeria.
E-mail: oguchic1@gmail.com

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Okolo CC, Adeyemo YI, Oguchi CO, Malami AB, Olatosi OO, Oredugba F. An analysis of the practice of accompanying paediatric patients for dental treatment in Kano, Nigeria. *Niger J Med* 2022;31:581-4.

Submitted: 18-Aug-2022

Revised: 05-Oct-2022

Accepted: 23-Oct-2022

Published: 29-Nov-2022

Access this article online

Quick Response Code:



Website:
www.njmonline.org

DOI:
10.4103/NJM.NJM_96_22

There is little information on the pattern of adults accompanying children to the dental clinic. As of the time of this study, only three publications on the subject were available: one each from the Middle East, Europe, and southern Nigeria.^[5-7]

Nigeria is broadly divided into the northern and southern parts, each of which has distinct differences in its predominant religion, diet, and culture, all of which can have an impact on one's oral and general health. Northern Nigeria is typically patrilineal, predominantly Muslim and mostly Hausa-speaking. The culture and religion expect the father to make the final call in critical decisions and provide as breadwinner, while the mother keeps the home full-time.^[8]

This study will examine the region's practice of accompanying children for dental treatments by comparing demographic features between the accompanying adults and the child patient, as well as examine the circumstance that surrounding their visit. It will determine significant trends in the population's health-seeking behaviors that could be leveraged to enhance oral health services for the Region.

MATERIALS AND METHODS

Clinic records of new patients who visited the Paediatric Dentistry clinic at the AKTH in Kano between January 2017 and June 2020 were retrieved and analyzed using the Statistical Package for Social Sciences (SPSS) (IBM Corp. Released 2017. IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY, USA). Patients with incomplete records were eliminated, as were those who were not accompanied by an adult.

Categorical variables (gender, age group, nature of the visit, and chief complaints) were described using frequencies and percentages. Bivariate (Chi-square test), multivariate analysis, and two-way analysis of variance were performed to determine the associations between the dependent and independent variables. Descriptive statistics were represented by tables and summary statistics such as mean and standard deviation. The level of statistical significance was set at $P < 0.05$.

Ethical considerations

The Ethics and Research Committee of the AKTH, Kano granted the ethical approval for the study: (Protocol number NHREC/28/01/2020/AKTH/EC/2873).

RESULTS

As shown in Table 1, the data sets of 1650 paediatric dentistry patients and adult pairs were analyzed. The ages of the child patients (768 females and 882 males) ranged from 4 days to 16-year-old. Most (69.5%) of the adults were female, and majority (65.8%) of the female adults were the biological mothers of the accompanied children.

Female adults commonly accompanied female patients ($\chi^2 = 19.86$, $P < 0.001$), visited more in emergencies ($\chi^2 = 3.97$, $P < 0.05$) and very often accompanied the youngest set of children, that is, the 0–5-year olds ($\chi^2 = 17.46$,

$P < 0.001$). Mothers more frequently accompanied female patients ($\chi^2 = 15.06$, $P < 0.001$) as well as the youngest children ($\chi^2 = 20.07$, $P < 0.001$), while, fathers commonly accompanied the male patients and the older groups of children (the six–16-year-old).

Most of the adult–child pairs (82%) were of the Hausa ethnic group and they mostly visited on account of dental emergencies ($\chi^2 = 16.33$, $P < 0.001$). Most of the study participants (94.4%) practiced Islam and also mostly visited with emergencies ($\chi^2 = 7.47$, $P = 0.006$).

Table 2 shows that adult males were twice as likely to accompany male patients (adjusted odds ratio [aOR] = 2.04; 95% confidence interval [CI]: 1.113.71; $P = 0.02$), and had 78% lower odds of accompanying patients to dental emergencies: these finding were statistically significant (aOR = 0.78; 95% CI: 0.610.99; $P = 0.05$). Hausa-adults were more likely to accompany children to emergency treatments, and this was statistically significant (aOR = 1.68; 95% CI: 1.212.33; $P = 0.002$). Christians had 83% lower odds of visiting for emergencies, however, this was not statistically significant (aOR = 0.83; 95% CI: 0.491.41; $P = 0.41$).

Table 3 shows that mothers constituted the majority of accompanying adults (68.5%) while fathers were comparatively fewer: 24.3%. Siblings, family members, and friends accompanied the patients less frequently (7.2%).

As shown in Figure 1, pain was the most common presenting complaint (53.6%) while routine check-up was the least reason for dental visits (0.8%).

DISCUSSION

This study found that parents were the adults who accompanied children patients to the dentist the most frequently, and this corroborated with the observations from southern Nigeria and the United Kingdom on the issue.^[5-7] Aside from the emotional and psychological benefits to the child, the presence of parents at dental appointments has been

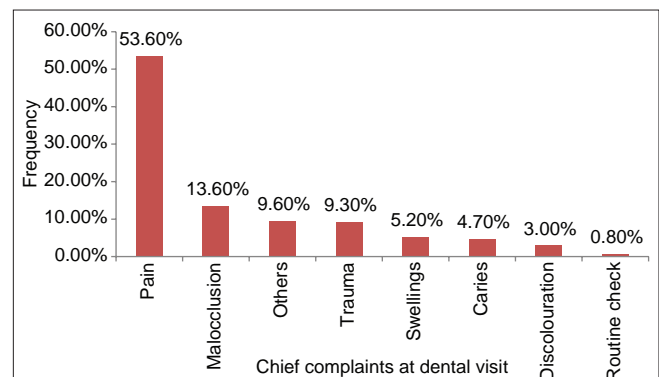


Figure 1: Distribution of chief complaints among the patients. Others include: Halitosis, mobile teeth, bleeding gums, cleft lip and palate, supernumerary tooth, retained deciduous teeth, dentine hypersensitivity and tongue-tie

Table 1: Bivariate analysis relating pediatric dental patients with accompanying adults

Variable	n	Child patient		Nature of visit		Age group (years)		
		Female, n (%)	Male, n (%)	Elective, n (%)	Emergency, n (%)	0-5, n (%)	6-10, n (%)	11-16, n (%)
Accompanying adult								
Female	1146	572 (50.2)	571 (49.8)	236 (20.6)	910 (79.4)	243 (21.2)	593 (51.7)	310 (27.1)
Male	504	193 (38.3)	311 (61.7)	126 (25.0)	378 (75.0)	69 (13.7)	260 (51.6)	175 (34.7)
χ^2 ; P		19.86; <0.001*		3.97; 0.05*		17.46; <0.001*		
Relationship								
Mother	1085	541 (49.9)	544 (50.1)	228 (21.0)	857 (79.0)	233 (21.5)	558 (51.4)	294 (27.1)
Father	402	156 (38.8)	246 (61.2)	103 (25.6)	299 (74.4)	58 (14.4)	217 (54.0)	127 (31.6)
Nonparent	163	71 (43.6)	92 (56.4)	31 (19.0)	132 (81.0)	21 (12.9)	78 (47.9)	64 (39.3)
χ^2 ; P		15.06; 0.001*		4.54; 0.10		20.07; <0.001*		
Ethnicity								
Non-Hausa	296	136 (45.9)	160 (54.1)	91 (30.7)	205 (69.3)	60 (20.3)	164 (55.4)	72 (24.3)
Hausa	1354	632 (46.7)	722 (53.3)	271 (20.0)	1083 (80.0)	252 (18.6)	689 (50.9)	413 (30.5)
χ^2 ; P		0.05; 0.82		16.33; <0.001*		4.47; 0.11		
Religion								
Islam	1557	728 (46.8)	829 (53.2)	331 (21.3)	1226 (78.7)	295 (18.9)	806 (51.8)	456 (29.3)
Christianity	93	40 (43.0)	53 (57.0)	31 (33.3)	62 (66.7)	17 (18.3)	47 (50.5)	29 (31.2)
χ^2 ; P		0.49; 0.48		7.47; 0.006*		0.15; 0.93		

*Significant at $P < 0.05$ **Table 2: Multivariate analysis relating pediatric dental patients with accompanying adults**

Variable	Gender (male)		Nature of visit (emergency)		Age	
	aOR (95% CI)	P	aOR (95% CI)	P	F (df) ^a	P
Accompanying adult					Main effect of gender	
Female (ref)	1.0		1.0		F (1,1644)=0.061	0.80
Male	2.4 (1.11-3.71)	0.02*	0.78 (0.61-0.99)	0.05*		
Relationship					Main effect of relation	
Mother (ref)	1.0		-		F (2,1664)=3.683	0.0025*
Father	0.78 (0.41-1.47)	0.43	-			
Nonparent	0.84 (0.52-1.37)	0.49	-			
Ethnicity					Interaction effect (gender vs. relation)	
Non-Hausa (ref)	-		1.0		F (2,1644)=2.266	0.10
Hausa	-		1.68 (1.21-2.33)	0.002*		
Religion						
Islam (ref)	-	1.0				
Christianity	-	0.83 (0.49-1.41)	0.41			

*Significant at $P < 0.05$, ^aObtained using two-way ANOVA. aOR: Adjusted odds ratio obtained from binary logistics regression, Ref: Reference group, CI: Confidence interval, df: Degree of freedom, ANOVA: Analysis of variance**Table 3: Distribution of the relationship of accompanying adults to the child patient**

Relationship	Frequency (%)
Mother	1,090 (68.5)
Father	403 (24.3)
Brother	58 (3.5)
Uncle	36 (2.2)
Sister	33 (2.0)
Aunts	19 (1.1)
Others ^o	12 (0.7)
Stepmother	5 (0.3)

^oOthers include grandparents, in-laws, cousins, family friends

linked to clinical efficiency and therapeutic success.^[2] This understanding will help oral health educators to concentrate on parents in disseminating information about oral health.^[9]

According to the current study, mothers are the adults who accompany the youngest children and female children the most frequently. As a consequence of their traditional roles as home keepers, mothers spend more time with the children and are thus best positioned to listen to their dental complaints and accompany them to the dentist when required. This finding agrees with the assertion of some researchers who have opined that mothers and women can contribute significantly to the care of children's oral health if they possess the right knowledge.^[9]

In the current study, it was further observed that male adults were more likely to accompany boys, rather than girls, while female adults were more likely to accompany female patients. The predominant religion and culture around northern Nigeria encourage the chaperoning of (young) females by other members of their own gender. Researchers in Jordan, a country with a similar Muslim population, reported that males, especially fathers, commonly accompanied children to their dental appointments because the religious teachings encouraged women to spend limited time outdoors.^[6] The implication of religion and culture on health-seeking behaviors seem to be highlighted by these findings: health interventions are likely to be successful if the culture and sensibilities of the population they are intended to benefit are taken into consideration.^[10]

Majority of the clinic visits made in this study were for emergency purposes. This demonstrates poor prevention practices as well as pain-driven health-seeking behaviours common in socially disadvantaged populations.^[11-14] In contrast to developed nations with social insurance or free health care for vulnerable populations, dental treatments are frequently thought of as expensive in developing countries.^[15,16] Even though the study population's late-stage disease presentation pattern may have been caused by poverty, the introduction of medical social welfare packages can encourage early and frequent clinic visits and have an impact on Nigerians' health-seeking behaviors.^[17]

This study also revealed that fathers were the adults who were least likely to accompany children in an emergency. By virtue of their traditionally outlined roles, men as breadwinners spend more time away from their children's immediate surroundings. While they might be unavailable during emergencies, they might be able to plan to accompany their children to scheduled appointments.^[6]

When adults other than the fathers are present, emergency patients frequently have to wait for treatment approval or financial support, thus delaying the decision-making process for their medical care. Aside from the risk of further complications, the delay frequently necessitates multiple clinic visits for the child as appointments are rescheduled or interim first-aid treatments are revised.^[18]

The limitation of this study lies in its retrospective nature, which has prevented further exploratory analysis and consequently, more generalizable conclusions. In the future, multi-center longitudinal studies with a qualitative component may be helpful to appreciating the various factors that influence health-seeking behaviours.

CONCLUSION

This study reveals that parents were the most common adults that accompanied paediatric patients to their dental appointments in Kano State. Mothers more frequently

accompanied the youngest children, girls as well as children who visited on account of dental emergencies, while fathers more frequently accompanied older children, boys, and children who came for elective treatments. Economic and cultural reasons seemed to influence the health-seeking behavior of this study population.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

- Gbobo PI, Oke-Chinda M. An analysis of the doctrine of informed consent in Nigeria's Health Care Services. *J Law Policy Global* 2018;69:15.
- Melo EM, Ferreira PL, Lima RA, Mello DF. The involvement of parents in the healthcare provided to hospitalized children. *Rev Lat Am Enfermagem* 2014;22:432-9.
- Lal SM, Parekh S, Mason C, Roberts G. The accompanying adult: Authority to give consent in the UK. *Int J Paediatr Dent* 2007;17:200-4.
- Available from: <https://akth.gov.ng/wp/about/>. [Last accessed on 2022 Aug 16].
- Virdee PK, Rodd HD. Who accompanies children to a dental hospital appointment? *Eur Arch Paediatr Dent* 2007;8:95-8.
- Khraisat HM, Al-Sakarna BK. Who accompanies paediatric dental patients and the types of dental treatment provided at queen Alia Military Hospital? *J R Med Serv* 2011;102:1-5.
- Ogordi PU, Azodo CC. Child dental patient accompanying person: A cross-sectional study. *Saudi J Health Sci* 2016;5:72.
- Anedo AO. "The characteristics, variations and dynamics of Nigerian cultures" in Themes in Nigerian Peoples and Cultures. Awka: SOGSNAU. ISBN: 978-3501437. Available at <http://www.worldcat.org/title/themes-in-nigerian-peoples-and-cultures/oclc/649690400>.
- Olatosi OO, Mgbemere OJ, Oyapero A, Omotuloye AS, Okolo CC. Awareness and preferred mode of getting information on first aid management of avulsed permanent teeth: Survey of Nigerian mothers. *Pesqui Bras Odontopediatria Clin Integr* 2020;11:21-4.
- Akaji EA, Chukwunke FN, Okeke UF. Attendance pattern amongst patients at the dental clinic of the University of Nigeria Teaching Hospital, Enugu, Nigeria. *Niger J Med* 2012;21:74-7.
- Truong M, Paradies Y, Priest N. Interventions to improve cultural competency in healthcare: A systematic review of reviews. *BMC Health Serv Res* 2014;14:99.
- Onyejaka NK, Lawal BN, Okechukwu RA, Osayande MO, Alamba IC. Pattern of patients' attendance to the dental clinic of federal college of dental technology and therapy, Enugu, Nigeria. *Pan Afr Med J* 2018;29:151.
- Olajide M. Pattern and distribution of patients' dental attendance in a Nigerian Tertiary Centre. *Saudi J Oral Dent Res* 2021;6:251-60.
- Taiwo OA, Soyele OO, Ndubuizu GU. Pattern of utilization of dental services at federal medical centre, Katsina, Northwest Nigeria. *Sahel Med J* 2014;17:108.
- Kandelman D, Arpin S, Baez RJ, Baehni PC, Petersen PE. Oral health care systems in developing and developed countries. *Periodontol* 2000 2012;60:98-109.
- Vujicic M, Buchmueller T, Klein R. Dental care presents the highest level of financial barriers, compared to other types of health care services. *Health Aff (Millwood)* 2016;35:2176-82.
- di Bella E, Krejci I, Ardu S, Leporatti L, Montefiori M. What should we expect from Switzerland's compulsory dental insurance reform? *BMC Health Serv Res* 2018;18:272.
- Anyanechi CE, Saheeb BD. Reasons underlying failure to seek early dental treatment among patients presenting in a Nigeria Tertiary Hospital. *J Med Biomed Res* 2013;12:37-45.