

## Natal and neonatal teeth myths in a rural Nigerian community

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### Abstract

**Introduction:** The presence of natal/neonatal teeth in infants is sometimes associated with negative societal attitudes. Literature regarding attitudes and beliefs of residents of Igbo Ora, Nigeria, regarding natal teeth is non-existent. It is therefore important to obtain baseline data to highlight knowledge gaps regarding natal/neonatal teeth in infants.

**Aim:** To determine the attitudes and beliefs of residents of Igbo Ora to natal/neonatal teeth in infants.

**Methods:** A cross sectional study was conducted among 339 women attending dental outreach programmes in Igbo Ora using a pretested 17-item semi structured questionnaire.

**Results:** Over two fifths (48.7%) believed that a natal tooth is seen in an evil child. A third (36.0%) mentioned that the affected child is an embarrassment to the family. Over half (61.9%) were of the opinion that a natal tooth can affect a child negatively. Of these, 104 (49.5%) and 58 (27.6%) stated that the child “would suffer stigmatization” and “engage in strange things” respectively. Mothers of children with natal teeth were usually advised to extract the teeth, 74 (21.8%), hide the child, 74 (21.8%) and perform sacrifices to appease the gods, 69 (20.4%). The belief that a natal tooth is not associated with spiritual consequences increased with higher educational qualification ( $p < 0.001$ ).

**Conclusion:** This study reveals that knowledge gaps regarding natal/neonatal teeth are present among inhabitants of Igbo Ora. Appropriate health education is needed for the community members particularly targeted at women and the less educated.

**Keywords:** Child, Natal teeth, Neonatal teeth, Myths, Misconceptions

### Résumé

**Introduction :** La présence de dents natales / néonatales chez les nourrissons est parfois associée à des attitudes sociétales négatives. La littérature concernant les

attitudes et les croyances des résidents d'Igbo Ora, au Nigeria, concernant les dents natales est inexistante. Il est donc important d'obtenir des données de référence pour mettre en évidence les lacunes dans les connaissances concernant les dents natales / néonatales chez les nourrissons.

**Objectif :** Pour déterminer les attitudes et les croyances des résidents d'Igbo Ora vis-à-vis des dents natales / néonatales chez les nourrissons.

**Méthodes :** Une étude transversale a été menée auprès de 339 femmes participant à des programmes de sensibilisation dentaire à Igbo Ora à l'aide d'un questionnaire semi-structuré prétesté en 17 points.

**Résultats :** Plus de deux cinquièmes (48,7%) croyaient qu'une dent natale était vue chez un enfant maléfique. Un tiers (36,0%) mentionnait que l'enfant touché est un embarras pour la famille. Plus de la moitié (61,9%) était d'avis qu'une dent natale pouvait affecter négativement un enfant. Parmi ceux-ci, 104 (49,5%) et 58 (27,6%) ont déclaré que l'enfant ‘souffrirait de stigmatisation’ et ‘s'engagerait dans des choses étranges’ respectivement. Il était généralement conseillé, aux mères des enfants à dents natales, d'extraire les dents 74 (21,8%), de cacher l'enfant 74 (21,8%) et de faire des sacrifices pour apaiser les dieux 69 (20,4%). La croyance selon laquelle une dent natale n'est pas associée à des conséquences spirituelles a augmenté avec une qualification éducative plus élevée ( $p < 0,001$ ).

**Conclusion :** Cette étude révèle que des lacunes dans les connaissances concernant les dents natales / néonatales sont présentes chez les habitants d'Igbo Ora. Une éducation à la santé appropriée est nécessaire pour les membres de la communauté, particulièrement destinés aux femmes et aux moins instruits.

**Mots-clés:** Enfant , Dents natales, Dents néonatales, Mythes, Fausses idées

### Introduction

Natal and neonatal teeth erupt prematurely in infants; while natal teeth erupt at birth, neonatal teeth erupt within the first month of life [1]. Premature eruption of teeth has been a subject of interest since it was first documented by Titus Livinus in 59 BC [2], and has been associated with various beliefs in different cultures. It has been viewed positively in some societies, particularly in developed countries. In

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England, it was believed that children with natal/neonatal teeth will become famous soldiers, while in France and Italy the condition was thought to guarantee conquest of the world [3]. On the other hand, negative opinions have existed among the Chinese as natal teeth were believed to bring ill luck, particularly for girls [4]. Among the Ural/Altaic tribes, affected babies were believed to become witches and sorcerers [5]. In Poland, Africa and India, superstitions regarding natal/neonatal teeth have existed over years [6] and among some African tribes, children born with teeth were murdered soon after birth as it was thought that they would bring misfortune [6].

In Nigeria, 53.7% of residents in a rural community in Ibadan felt the condition was indicative of an evil child [7]. The authors, in their practice, have observed untold anxiety among parents of children with natal/neonatal teeth. This is, possibly, because of its link with negative cultural and societal beliefs.

Literature documenting attitudes and beliefs of residents in Igbo Ora, a remotely located Nigerian town with a primary oral health care outpost, to natal/neonatal teeth is scarce. It is therefore important to obtain baseline data regarding this, to reveal any misconceptions or knowledge gaps about natal teeth. This will serve as a basis in a larger study for the design of appropriate educational materials such as culturally appropriate videotapes to improve knowledge and correct negative attitudes regarding natal/neonatal teeth. The outcome of that approach could then be utilized elsewhere with similar socio-demographic constitution.

The aim of this study was to determine the attitudes and beliefs of residents of Igbo Ora, a rural Nigeria community, to natal/neonatal teeth in children.

### **Materials and methods**

This research used a cross sectional study design and was conducted over a period of four weeks in Igbo Ora. Igbo Ora is a rural town in Oyo State, south-western Nigeria, situated 80 kilometers north of Lagos. It is the headquarters of Ibarapa Central Local Government and has a population of approximately 60,000 people [8]. The characteristics of the town is typical of rural communities in Nigeria of which many of the inhabitants are farmers, artisans and traders.

The study population comprised of women attending dental outreach programmes in Igbo Ora. A minimum sample size of 266 was calculated for the study using a sample size calculation formula for cross

sectional study [9] at a power of 90%, a degree of error of 5% and prevalence rate of 22.2% obtained from a previous study [7].

Ethical approval for the study was obtained from Ethical Review Committee of the Ministry of Health, Oyo State. In addition to this, approval and permission was also obtained from the heads of the health centers and the head nurses in charge of the antenatal clinics.

### *Data Collection*

Data for the study was collected by two trained research assistants using a 17-item semi structured interviewer administered questionnaires. The questionnaire was developed by the authors with guidance from relevant literature in English language. It comprised of questions on biodata of the respondents such as the age, gender, tribe and educational qualification of respondents. Included also were questions that assessed beliefs about natal teeth, implication of natal teeth and its effect on the family and society, how to prevent its occurrence and the fate of such children in the community. Advice for mothers of these children was also sought.

The English version of the questionnaire was translated into Yoruba, the local language of this community and back translated into English by independent dentists well versed in both Yoruba and English Language, and who were not aware of the aims and objectives of the study. Minimal difference was found between the original English version and the back translated version of the questionnaire. The questionnaire was pretested among twenty women in the community who were not part of the study. The questions were further modified based on the interaction with the women to suit the study population as much as possible, before its final administration to the study participants. Before the participants were interviewed, the purpose of the study was explained to them. After this, consent was obtained individually from each participant and only those who consented to participate, understood the Yoruba language and had been resident within the community for at least six months were included in the study. Those below the age of 18 years were excluded from the study.

### *Data management*

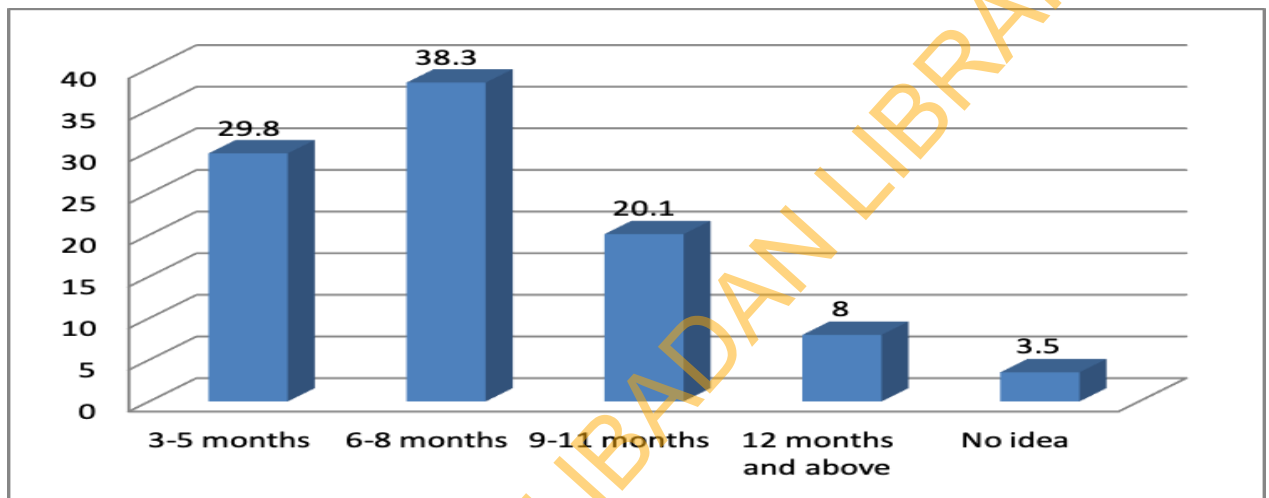
Data obtained was processed with SPSS version 21 and analyzed. Frequencies and proportions were generated for qualitative variables. Means and standard deviations were used to summarize numeric variables. Chi square statistics was used to determine associations between categorical variables and the level of significance set at  $p < 0.05$ .

**Results**

Three hundred and thirty-nine adult females participated in the study. The mean age of the study participants was 32.0 ( $\pm$  11.7) years. Table 1 illustrates the demography of the study participants. Responses to eruption date of the first tooth varied among the study participants with 130 (38.3%) mentioning that eruption of teeth into a child’s mouth should begin around 6 to 8 months of life (Figure 1).

About a third (33.9%) of the respondents had seen a child born with a tooth or one that erupted a tooth in the first few weeks of life.

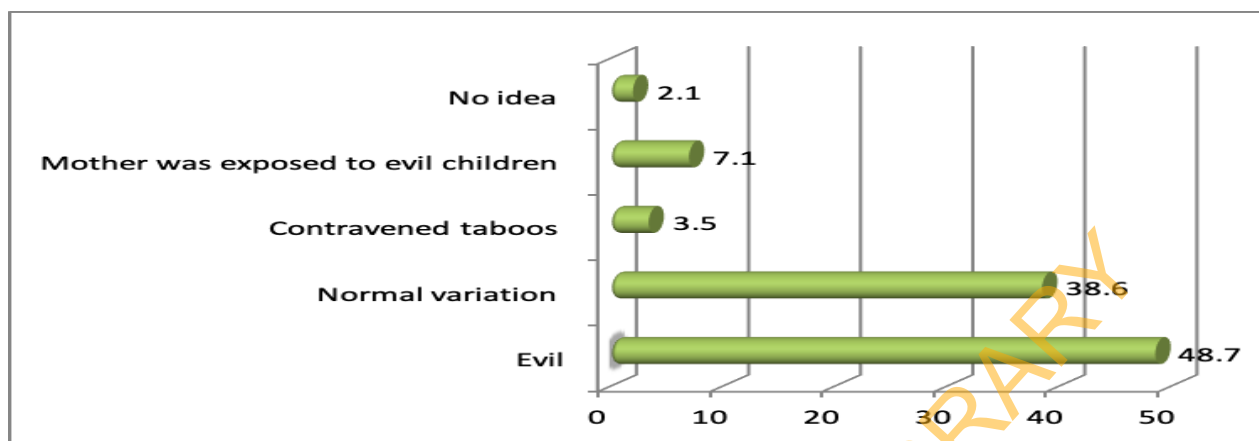
A natal tooth is believed to be seen in an evil child (165; 48.7%) and children whose mothers had contravened cultural taboos (12; 3.5%). Less than half of the respondents (131; 38.6%), believed it was a natural occurrence (Figure 2). The effects of having a child with a natal tooth in a family is as shown in



**Fig.1:** Respondents knowledge about date of eruption of first primary tooth in a child

**Table 1:** Demography of study participants

Variable	Frequency	%
<i>Age (years) n = 339</i>		
<25	92	27.1
25 – 34	133	39.2
35 – 44	65	19.2
>45	49	14.5
<i>Educational qualification n = 339</i>		
None	52	15.4
Primary	95	28.0
Secondary	131	38.6
Post-secondary	61	18.0
<i>Religion n = 324</i>		
Islam	228	70.4
Christianity	95	29.3
Traditional	1	0.3
<i>Tribe n = 339</i>		
Yoruba	327	96.4
Igbo	4	1.2
Hausa	8	2.4



**Fig. 2:** Perception of respondents about a child with natal tooth

**Table 2:** Beliefs about the effects of natal tooth on the family and advice to mothers of children with natal tooth

Variables	Frequency	%
<i>Effects of natal tooth on the family (n = 339)</i>		
Source of embarrassment	122	36.0
Family becomes an abomination to the society	122	36.0
A source of fear to the family	52	15.3
A curse to the family	36	10.6
No idea	7	2.1
<i>Perceived effects of natal tooth on the child (n = 339)</i>		
Negative effect	210	61.9
No effect	129	38.1
<i>Perceived negative effects of natal tooth on the child (n = 210*)</i>		
Stigmatization (Curses placed by the child with a natal tooth comes to pass and is permanent).	104	49.5
Child does strange extraordinary things	58	27.6
Child always does his/her things abnormally	27	12.9
Not sure	17	8.1
Child is dangerous	7	3.3
Child is dull	2	1.0
<i>Usual advice to mothers of children with natal tooth (n = 339*)</i>		
Leave the child alone	105	31.0
Extraction the tooth	74	21.8
Hide the child	74	21.8
Perform sacrifices to appease gods	69	20.4
Get rid of the child	8	2.3
Consult a doctor	2	0.6
Spiritual prayer	1	0.3
Consult oracle	1	0.3
No idea	9	1.6
<i>Prevention strategies against occurrence of natal tooth in pregnancy (n = 339*)</i>		
None - just a normal variation	99	29.2
Herbal concoction	96	28.3
Avoid contravening taboos	83	24.8
Engage in cultural rites for pregnant women	48	14.2
Regular attendance at antenatal clinics	6	1.8
Not walking at night	1	0.3
No idea	7	2.1

\*Multiple responses

Table 2. Almost half of the respondents (122; 36.0%) stated that such a child is usually a source of embarrassment, and 122 (36.0%) believed the family of the child with natal tooth becomes formidable and is an abomination to the community.

More than half (210; 61.9%) believed that natal tooth affects the child negatively. Of the 210 respondents, 49.5% (104) believed stigmatization is one of the ways natal tooth could affect a child negatively, because the presence of the tooth brings a certainty – “if the child curses someone the curse comes to pass and it is permanent”. Also, 58 (27.6%) believed that such child engages in strange things or extraordinary activities (Table 2). A major consideration was that the tooth will exfoliate earlier compared to other teeth.

Mothers of children with natal teeth were usually advised to; extract the tooth (74; 21.8%), “hide the child” (74; 21.8%) or “get rid of the child” (8; 2.3%). Other responses in addition to these were “performing sacrifices to appease gods” (69; 20.4%) (Table 2).

A significant association existed between educational qualification and beliefs about the natal tooth as the tendency of believing that the natal tooth is not associated with spiritual consequences increases with higher educational qualification ( $p < 0.001$ ) (Table 3). No other association was found between demography and beliefs.

## Discussion

This study has revealed that myths regarding natal/neonatal teeth abound among residents of Igbo Ora, a rural community in southwest Nigeria. This gives a huge cause for concern as these misconceptions have detrimental effects on the affected children and their families.

Timing of eruption of the primary dentition is considered important among Nigerian parents and they become worried when children erupt their teeth prematurely [7]. Eruption dates of primary teeth vary among various tribes [10]. Almost thirty percent of the respondents stated that babies cut their first teeth between three to five months while about two fifths felt they erupted between six to eight months. Their knowledge on timing of eruption of primary teeth was poorer than observed in a Saudi study where more than four-fifths of mothers knew that the first primary teeth erupt at six to seven months of age [11]. Their poor knowledge could be due to the fact that Igbo Ora is a rural community composed of inhabitants with relatively low literacy levels and probably very little has been done on combating erroneous beliefs about natal teeth in the community.

Regarding their perceptions of children born with teeth, a large proportion of the participants (48.7%) believed this was due to the fact that the baby is evil while others believed it was as a result of close proximity of mothers to other evil children while pregnant. An evil child in the traditional Yoruba culture

**Table 3:** Demography and beliefs about natal tooth

Demography variable	Beliefs about natal tooth n (%)		X <sup>2</sup>	p value
	Normal variation	Other reasons		
<i>Age (years)</i>				
< 25	36 (39.1)	56 (60.9)	2.479	0.479
25-34	49 (36.8)	84 (63.2)		
35-44	30 (46.2)	35 (53.8)		
> 45	16 (32.7)	33 (67.3)		
Total	131 (38.6)	208 (61.4)		
<i>Educational qualification</i>				
None	12 (23.5)	39 (76.5)	41.602	< 0.001*
Primary	27 (28.4)	68 (71.6)		
Secondary	46 (35.1)	85 (64.9)		
Post-secondary	45 (73.8)	16 (26.2)		
Total	130 (38.5)	208 (61.5)		

\*statistically significant

is viewed as “demon possessed”. It is traditionally believed that when pregnant women are in close contact with evil children, transference of spirits to their unborn babies occurs, leading to anomalies such as a natal tooth. Some of the respondents were also of the opinion that a natal tooth was the consequence of child’s mother contravening the cultural taboos. This reveals a high level of ignorance, which may be due to their remote location and strong beliefs in traditional information handed down by their ancestors. The etiology of natal teeth is unknown [12] but has been linked to maternal nutritional deficiency and fever during pregnancy [13], infection eruption accelerated by hormonal stimulation [13], hereditary transmission of a dominant autosomal gene [6] and osteoblastic activity in the area of the tooth germ [14]. Natal teeth are associated with certain syndromes such as Ellis Van Creveld [15], Craniofacial dysostosis and Sotos syndrome [16] and are more frequently associated with cleft lip and palate [17]. Polychlorinated biphenyls (PCBs), polychlorinated dibenzo-*p*-dioxins (PCDDs), and dibenzofurans (PCDFs) are environmental pollutants that have been known to increase the incidence of natal teeth [18]. However, the superficial position of the tooth germ associated with a hereditary factor seems to be the most accepted possibility [19].

The effect on the child’s family is dreadful, as respondents believed that the child would be a source of embarrassment, an abomination and the tooth becomes a source of fear to the family. Thus, the family becomes emotionally disturbed and this is hinged on the fact that these children are believed to be endowed with spiritual powers and authority. Such parents have occasionally resorted to extreme actions such as infanticide or abandonment of the child. Oyapero and Oyapero [20] reported the case of a three-day old Nigerian baby with a natal tooth abandoned on a refuse dump site. In some African communities, such babies are left in forests to die or murdered [21].

The children with natal teeth in the African culture are stigmatized, avoided and called all manner of names [20]. Over a third of the respondents were of the opinion that the natal tooth is an epitome of fear and affected children possess the powers to place permanent and irrevocable curses on people. For this reason, affected children are stigmatized. Effects of stigmatization are terrible as the child is taunted, mocked and avoided by the whole community thus leading to emotional problems. Interestingly, some participants were of the opinion that affected children,

as they grow older, engage in dangerous and strange activities even in their pastimes. For this reason, parents of such children at times will seek spiritual protection to forestall these activities. Traditionally, in South Western Nigeria, these children are often referred to as “*abami omo*” meaning strange children. These are wrong views about natal/neonatal teeth still predominant in this community.

Extraction of these teeth was believed to be the solution to this “abomination” by 21.8% of the respondents. Traditional “dentists” and quacks sometimes perform this. Teeth forcibly removed by quacks endanger as well as expose children to infections such as Human Immunodeficiency Virus, tetanus, hepatitis, and bacterial infections due to use of inappropriate and unsterilized instruments. About a fifth of the respondents would advise mothers of affected children to hide them and infanticide was suggested by a few. This is quite worrisome and requires appropriate intervention to disabuse the minds of residents of this community regarding children with natal/ neonatal teeth. “Consultation with the oracle, having spiritual prayers done and offering sacrifices to appease the gods” believed to be solutions to the evil associated with natal/neonatal teeth are reflections of the respondents’ strong association of this condition to cultural myths and legend. Similar situations have been experienced in Kenya where parents of the children with natal teeth may have to go to their rural homes for cleansing ceremonies of traditional healers who scrub away the unwanted teeth because it is associated with witch craft [22]. Importantly and worthy of note is that only two participants will advise mothers to seek medical consultation, revealing that only a minority are knowledgeable about this condition.

Preventive strategies to forestall natal teeth as suggested by the respondents are basically related to the cultural beliefs and include intake of herbal concoctions during pregnancy (28.3%). Avoidance of contravening taboos of the land and engagement of pregnant women in cultural rites were also deemed important. These rites include avoiding certain food types, which varies depending on each family’s traditional beliefs, and performing required traditional rites. Pregnant women in the Yoruba community are forbidden to walk around the street on sunny afternoons. If there is a need to go out, a stone or pin is fixed to their wrappers or dresses, which allegedly helps to wade away evil spirits believed to be present in the atmosphere on hot sunny afternoons. These evil spirits

are believed to chase away good babies from pregnant women and then “inhabit their wombs”. The stone or pin is to drive away “an evil child” from coming near them [23]. All these demonstrate a high level of ignorance regarding natal teeth in this community.

The study revealed that the less educated significantly believed more that natal teeth had spiritual consequences in comparison to the better educated.

### Conclusion

The study reveals gross misconception about natal teeth among the inhabitants of Igbo Ora. Thus, improvement of oral health education through health education intervention such as health talks and culturally appropriate videos should be targeted at the mothers and the community in general, particularly the less educated ones.

A limitation of this study is that data were collected from females attending dental outreach programmes, excluding males. A larger and more representative sample would have been gotten if we went from house to house and involved male participants as it is not known if their views differ from of females.

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