

Perception of Natal Tooth among Trainees in Primary Health Care-Related Programmes in Ibadan, Nigeria

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ABSTRACT

Babies born with teeth (natal teeth) are sufferers of stigmatization in the society due to the superstitious beliefs attached to their births. This study was conducted to explore the beliefs and attitude of trainees in primary health care-related programmes in Ibadan, Nigeria, towards natal tooth. Eighty eight students in primary health care-related programmes were purposively recruited for this study. Data were obtained from each participant using a well-structured self-administered questionnaire. Of the 88 questionnaires returned, 5 were discarded due to incomplete data. The data of the remaining 83 respondents were analysed using the SPSS version 16 software. The mean age (\pm SD) of the 83 respondents was 35.32 (\pm 10.22) years, 72.3% were females, 69.9% were Yorubas, 69.9% had a monogamous family background. Introductory lectures to oral health had been received by 83.1%, and 62.7% had seen babies with natal tooth before. Thirty three percent, 52%, 14%, 22%, and 41% of the respondents believed that dietary deficiency during pregnancy, hormonal disturbances during pregnancy, high grade fever during pregnancy, congenital syphilis, and genetic factors respectively were potential risk factors for natal tooth. Witchcraft, curses, will of God, evil spirits, and bad luck were believed to be potential causes of natal tooth by 10.8%, 9.6%, 34.9%, 10.8%, and 18.1% of the respondents respectively. The majority of the respondents (83.1%) exhibited positive attitude towards attending to babies with natal tooth, as potential health care professional. In conclusion, the majority of the trainees in primary health care-related programmes in Ibadan were not superstitious about natal tooth; however their knowledge of its risk factors was inadequate. Most of them showed positive attitude towards babies with natal teeth. There exists the need to educate them on the risk factors of natal tooth.

Keywords: Primary health care; Ibadan; natal tooth; perception

Aims Research Journal Reference Format:

Kanmodi, K.K., Olukoya, O.E. & Akinloye, A.G. (2017): Perception of Natal Tooth among Trainees in Primary Health Care-Related Programmes in Ibadan, Nigeria. *Advances in Multidisciplinary & Scientific Research Journal*. Vol. 3. No.3, Pp 95-103

1. INTRODUCTION

The birth of a baby can either bring joy or worry to the parents (Farsi & Ahmed 2014). During infancy, growth and development occurs in all the systems of the body, one of which is the eruption of the first primary tooth (Cunha et al, 2001). The eruption of the first tooth at about six months of age is not only a milestone in the functional changes in the life of the child, but also in the emotions of the parents too (Farsi & Ahmed, 2014). For some infants, teeth might be present at birth, and this can be a source of worry to the parents (Cunha et al, 2001; Farsi & Ahmed 2014). The tooth observed at birth is considered as "natal tooth" while the tooth observed in the first 30 days of life is considered as "neonatal tooth" (Massler & Savara, 1950; Leung & Robinson 2006).

Across the world, there has been varying findings on the prevalence of natal and neonatal teeth, however, the prevalence ratio accepted by many authors range between 1:2000 and 1:3500 (Massler & Savara, 1950; Bodenhoff & Gorlin, 1963; Spouge & Feasby 1966; Chow, 1980; Cohen, 1984; Zhu, 1995). However, the prevalence of natal tooth in Nigeria is unknown (Eseigbe et al., 2013). Also, there are controversies on the male-female ratio of the prevalence of natal and neonatal teeth, some authors reported higher ratio for females (Massler & Savara, 1950; Allwright, 1958; Chow, 1980; Anderson, 1982; Kates et al., 1984; Leung 1986; Freudenberger et al., 2008), while some documented that there is no correlation with gender (Bodenhoff, 1963; Cunha, 2001; Singh, 2004). In addition, natal tooth has a higher prevalence, compared to neonatal teeth (Massler & Savara, 1950; Bodenhoff & Gorlin, 1963; Spouge & Feasby, 1966; Chow, 1980; King & Lee, 1989; El Khatib, 2005).

Dietary deficiencies of mother during pregnancy, endocrine disturbances during pregnancy, infection during pregnancy, hereditary factors, febrile conditions during pregnancy, and environmental toxins had been considered in the literatures to be potential risk factors for natal tooth (Markou et al., 2012). There are many beliefs and assumptions associated with natal tooth. As far as 59 B. C., natal tooth had been conceived as a projection of calamity (Cunha et al., 2001). Also, Calus Plinus Secundus (the Elder), in 23 B. C., was of the belief that a male child with natal teeth has a glorious future awaiting him, while he also believed that it is an evil omen for a female child (Cunha et al., 2001). Among the Chinese, natal tooth is a sign of evil omen, and this was because the Chinese believed that one of the parents of a child with this tooth will die if the child starts to bite (Cunha et al., 2001). In many traditions in Africa, particularly in Nigeria, children born with teeth were murdered or neglected after they were born, due to their belief that such child would bring bad luck to every individual that comes in contact with them (Bodenhoff et al., 1963; Cunha et al., 2001; Oyapero & Oyapero 2014).

In Nigeria, there had been reports of cases in which children born with teeth were abused by their parents, on the basis of superstitious beliefs, coupled with rejection and stigmatization from people (Ndiokwelu et al., 2004; Eseigbe et al., 2013; Oyapero & Oyapero, 2014). Bankole and Oke (2013) also reported that 11.1% of nurses working in the government hospitals in Ibadan had superstitious beliefs about natal tooth. This indicates that superstitious beliefs also exist among some health workers in our society. Our society needs to be educated on natal tooth and its causative risk factors, in order to change their perception of natal tooth, and ensure that proper health care and attention is given to these affected babies. This study was conducted to explore the belief patterns and attitude of trainees in primary health care-related programmes, in Ibadan, on natal tooth. This population group was selected for this study because they will soon join the workforce that deliver health care services at the primary health care level, hence the outcome of this study will define their perception of natal tooth.

2. MATERIALS AND METHODS

2.1 Study setting

This study was conducted among students running primary health care-related courses in three randomly selected schools within the city of Ibadan, Nigeria. The participating schools were the School of Health Information Management (SHIM), the School of Community Health Training Programme (SCHTP), and the Federal Training Centre for Teachers of Health Sciences (FTCTHS). All the three institutions were situated within the University College Hospital environment, Ibadan.

The SHIM runs two kinds of diploma programmes in Health Information Management: the ordinary national diploma (OND) and the higher national diploma (HND) programmes. Each of the two programmes are of two years duration.

The SCHTP only runs a HND programme in Community Health. Students in this programme had previously had an OND from another school, either in Community Health or in a related discipline.

The FTCTHS runs the following diploma programmes: Primary Health Care Tutors' Course; the Nurse Tutors' Course; the Midwife Tutors' Course; and the Public Health Nurse Tutors' Course. All the programmes run by FTCTHS are two-year programmes, except for the Primary Health Care Tutors' Course that is a one-year programme. All the students of FTCTHS receive almost all lectures together except for the students of Primary Health Care Tutors' Course.

2.2 Ethical approval

Approval to conduct this study was obtained from the Ministry of Education, Ibadan, Nigeria.

2.3 Participants' selection

Only the students that had completed half of their training duration were purposively selected to participate in this study. This is because they have all been exposed to at least half of the contents of the curriculum in their respective academic disciplines.

2.4 Sample size determination

The size of our study population was obtained, and the sample size (n) was determined using the Yamane (1967) formula:

$$n = \frac{N}{1 + N (e)^2}$$

where:

N is the population size; and e is the precision level (=0.05) at 95% confidence level.

The calculated sample size (n) is 117.

2.3 Study tool

The tool used in this study was a well-structured 21-item questionnaire. The questionnaire had three sections: sections A, B, and C.

Section A obtained information on the socio-demographic characteristics of each participant.

Section B obtained information about exposure of each participant to introductory oral health lectures within their academic disciplines, the number of babies they had seen having natal tooth, and their beliefs on the risk factors of natal tooth. The beliefs of each participant were explored using a four-point Likert scale: point 1=strongly disagree; point 2=disagree; point 3=agree; and point 4=strongly agree.

Section C obtained explored the attitude of each participant towards babies with natal tooth using a four-point Likert scale, as used in the Section B of same questionnaire.

3. DATA COLLECTION AND ANALYSIS

The students were approached in their various classrooms, during their lecture-free period. The aims and objectives of the study were explained to them. They were also informed that participation is voluntary and confidential. Only eighty eight individuals volunteered to participate in the study. Informed verbal consent was obtained from each participant before administering the questionnaire. All questionnaires were returned filled. Five of the questionnaires returned were discarded due to incomplete data, so we finally computed the data of 83 respondents. Data were entered into the SPSS version 16 software and cleaned before analyses. Frequency distributions for all variables were determined and illustrated using tables and charts. The mean (\pm SD), and modal Likert scores of the responses of our respondents were also determined. A mean score of 1.00 to <2.50 indicates disagreement, a mean score of 2.5 indicates neutrality, while a mean score >2.50 to 4.00 indicates agreement.

4. RESULTS

Response rate was 70.9% (83/117). The mean (\pm SD) age of the eighty three respondents was 35.32 (\pm 10.22) years, sixty (72.3%) were females, 58 (69.9%) were Yorubas. 58 (69.9%) were from a monogamous family background, and 50 (60.2%) were married. Thirty one respondents (37.3%) were students from the SHIM, 21 (25.3%) were from the SCHTP, while 31 (37.3%) were from the FTCTHS (Table 1). All, except 14 (16.9%) respondents have had introductory lectures to oral health during their training (Figure 1). Only 31 (37.3%) respondents have not seen a baby with natal tooth before, while the rest have seen at least a baby with such. (Figure 2). Less than half of our respondents believed that dietary deficiency during pregnancy, high grade fever during pregnancy, congenital syphilis, and parents' gene were potential risk factors of natal tooth, except for hormonal disturbances during pregnancy, which more than half (62.7%) believed it to be a risk factor. The majority of our respondents did not believe that natal tooth can be caused by witchcraft, curses, will of God, evil spirits, and bad luck. All the mean (\pm SD) Likert scores exploring the beliefs of our respondents on risk factors of natal tooth were below 2.5, except for that on hormone disturbances during pregnancy which had a score of 2.65 (\pm 1.002) (Table 2).

More than four-fifth of our respondents (83.1%) indicated that they could conveniently attend to the parent of a baby with natal tooth in the health centre without any fear, 72 (86.7%) indicated that they could play with a baby with natal tooth without any fear, 76 (91.6%) indicated that they could visit the family of a baby with natal tooth if their duty calls for that as an health officer, only 6 (7.2%) perceived natal tooth in a baby is a sign of evil omen, while only 5 (6.0%) respondents agreed that babies with natal tooth are children with evil powers. All the mean (\pm SD) Likert scores exploring the attitude of our respondents towards babies with natal tooth were above 2.5, except for views on natal tooth as an evil omen and evil powers which were 1.54 (\pm 0.674) and 1.49 (\pm 0.653) respectively. (Table 3)

5. DISCUSSION

This study is of significance because it explores the perception of our respondents on natal tooth. Our study population have some special attributes which are worthy of note. The health information officer plays a vital role in the primary health care setting, in that they are usually the first point of contact when a patient visits a health care centre, because most patients will have to open a case file or get their case file retrieved from the medical records unit before seeing their caregivers. The primary health care officers and the community health officers deliver preventive care through health education and promotion programmes, while the nurse/midwife/public health nursing tutors play a key role in the training of nurses, midwives, and public health nurses that work in our various community health centres. Although, our respondents are all trainees, but they will eventually join the pool of this workforce in the nearest future. Oral health is a very important aspect of public health, and it had been recommended by the World Health Organization (WHO) that it should be included into the national and community health education programmes worldwide (WHO 2015). The three schools that participated in this study embraced this policy by incorporating oral health education into their curriculum; hence almost all their students have some knowledge about oral health (Figure 1).

Some of our respondents indicated that they have repeatedly seen babies with natal tooth in the past (Figure 2). This suggests that cases of babies born with teeth are not rare events in our society, and this contradicts the reports of Esegbe et al. (2013) and Adekoya-Sofowora C. A. (2008) that births of babies with natal teeth are rare occurrences in our society. Our findings may also suggest a high possibility that babies born with teeth in our society are rarely presented at the hospitals for Orthodox management, as it has been reported by Esegbe et al. (2013) that extremely few cases of natal teeth are seen in the hospital. Furthermore, some of the parents of such babies prefer seeking help from traditional medicine men to visiting the hospital (Esegbe et al. 2013). Oyapero & Oyapero (2014) also reported that some parents do abandon these babies at refuse dumps to die. These factors may collectively contribute to reasons why extremely few hospital cases has been reported (Esegbe et al., 2013). However, the reluctance of these involved parents may be due to their superstitious beliefs coupled with the ill-effects of the societal stigma associated with these babies (Esegbe et al., 2013; Oyapero & Oyapero, 2014).

The beliefs and attitude of our study population towards natal tooth is noteworthy. There are varying belief patterns on the risk factors of natal tooth among our respondents (Table 2). A significantly large proportion of our respondents did not believe in the medical risk factors of natal tooth. This may suggest that they have inadequate knowledge on the medical risk factors of natal tooth. Furthermore, the majority of our respondents were not superstitious about natal tooth. In contrary, many people in various Nigerian communities, particularly the rural communities, are of the belief that abnormal medical conditions, natal tooth inclusive, are caused by spiritual forces such as evil spirits, curses, gods, witchcraft, among others (Jegade S. A., 2002; Markou et al., 2012). This may suggests that the health education which our study population had received might have been a contributory factor to why many of them were not superstitious about natal tooth. Health education has been found to positively change the knowledge and attitude of individuals (Abiola et al., 2012; Abiodun et al., 2014). Health awareness creation could therefore enlighten our general population on natal tooth.

However, superstitious beliefs about baby tooth have also been reported to exist among some Nigerian health workers (Oziegbe et al., 2011; Bankole & Oke, 2013). Bankole and Oke (2011) reported that 11.1% of nurses in government hospitals in Ibadan had superstitious beliefs about natal tooth. This indicates that there exists the need to educate both the health trainees and health workers on natal tooth. Furthermore, the majority of our respondents had a positive attitude towards delivering health care services to babies with natal teeth, although only very few of them showed a negative attitude towards such (Table 3). The negative attitude of these few respondents can be modified through health education on natal tooth. Health education has been proven to change the attitude of individuals towards health matters (Abiola et al., 2012; Abiodun et al., 2014).

Educating this population on the medical risk factors and effective enlightenment of those that were superstitious about abnormal medical conditions is of public health benefit, because this population will later be in the frontiers of community health awareness creation programmes in the future. However, this study has a few limitations. We did not enquire into what informed our respondents of their beliefs. This study was a quantitative study, it only assessed the participants perception based only on the researchers' questions. Also, we did not meet our targeted sample size, as many of the students were busy preparing for their examination during the period the data was collected.

6. CONCLUSION

The majority of the trainees in primary health care-related programmes in Ibadan did not believe in the medical risk factors of natal tooth, and most of them were not superstitious about natal tooth. Most of them showed positive attitude towards baby with natal tooth. There exists the need to educate our study population on the potential risk factors of natal tooth.

Declaration

The authors declared no competing interest.

This research project was funded by the Cephass Health Research Initiative (CHRI). This study constitutes part of the phase I projects of the Child Smile Program, CHRI.

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APPENDICES

Table 1: Socio-demographic features of respondents

Socio-demographic features (n=83)	N	%
Gender		
Male	23	27.7
Female	60	72.3
Mean age (\pmSD)*		
	35.32 (10.22)	
Tribe		
Yoruba	58	69.9
Hausa	3	3.6
Igbo	5	6.0
Others	17	20.5
Family background		
Monogamous	58	69.9
Polygamous	22	26.5
Not specified	3	3.6
School		
SHIM	31	37.3
SCHTP	21	25.3
FTCTHS	31	37.3

n=total number of respondents; N=number of respondents in each category

*Age in years

Table 2: Response of respondents on the risk factors of natal tooth

Risk factors of natal tooth	Likert score			Distribution of response		
	Mean	SD**	Mode	TRID (%)	TRIA (%)	NR (%)
MEDICAL						
Dietary deficiency during pregnancy	2.28	1.005	2	45 (54.2)	33 (39.7)	5 (6.0)
Hormonal disturbances during pregnancy	2.65	1.002	3	29 (34.9)	52 (62.7)	2 (2.4)
High grade fever during pregnancy	1.89	0.742	2	67 (80.7)	14 (16.9)	2 (2.4)
Congenital syphilis	2.04	0.823	2	57 (68.7)	22 (26.5)	4 (4.8)
Parent's gene	2.42	0.965	3	39 (47.0)	41 (49.4)	3 (3.6)
SUPERNATURAL						
Witchcraft	1.58	0.722	1	72 (86.4)	9 (10.8)	2 (2.4)
Curses	1.54	0.748	1	71 (85.5)	8 (9.6)	4 (4.8)
Will of God	2.01	1.037	1	51 (61.4)	29 (34.9)	3 (3.6)
Evil spirits	1.57	0.728	1	70 (84.3)	9 (10.8)	4 (4.8)
Bad luck	1.69	0.889	1	66 (79.5)	15 (18.1)	2 (2.4)

* A mean score of 1.00 to <2.50 indicates disagreement, a mean score of 2.5 indicates neutrality, while a mean score >2.50 to 4.00 indicates agreement; **Standard Deviation; TRID=total respondents in disagreement; TRIA=total respondents in agreement; NR=no response

Table 3: Attitude of respondents towards natal tooth

Variables	Likert score*			Distribution of response		
	Mean	SD**	Mode	TRID	TRIA	NR
I can conveniently attend to the parent of a baby with natal tooth in the health centre without any fear	3.16	0.829	3	12 (14.5)	69 (83.1)	2 (2.4)
I can play with a baby with natal tooth without any fear	3.25	0.716	3	9 (10.8)	72 (86.7)	2 (2.4)
I can visit a family of a baby with natal tooth if my duty calls for it as an health officer	3.30	0.660	3	5 (6.0)	76 (91.6)	2 (2.4)
Natal tooth in a baby is a sign of evil omen	1.54	0.674	1	74 (89.2)	6 (7.2)	3 (3.6)
Babies with natal tooth are children with evil powers	1.49	0.653	1	77 (92.7)	5 (6.0)	1 (1.3)

* A mean score of 1.00 to <2.50 indicates disagreement, a mean score of 2.5 indicates neutrality, while a mean score >2.50 to 4.00 indicates agreement; **Standard Deviation; TRID=total respondents in disagreement; TRIA=total respondents in agreement; NR=no response

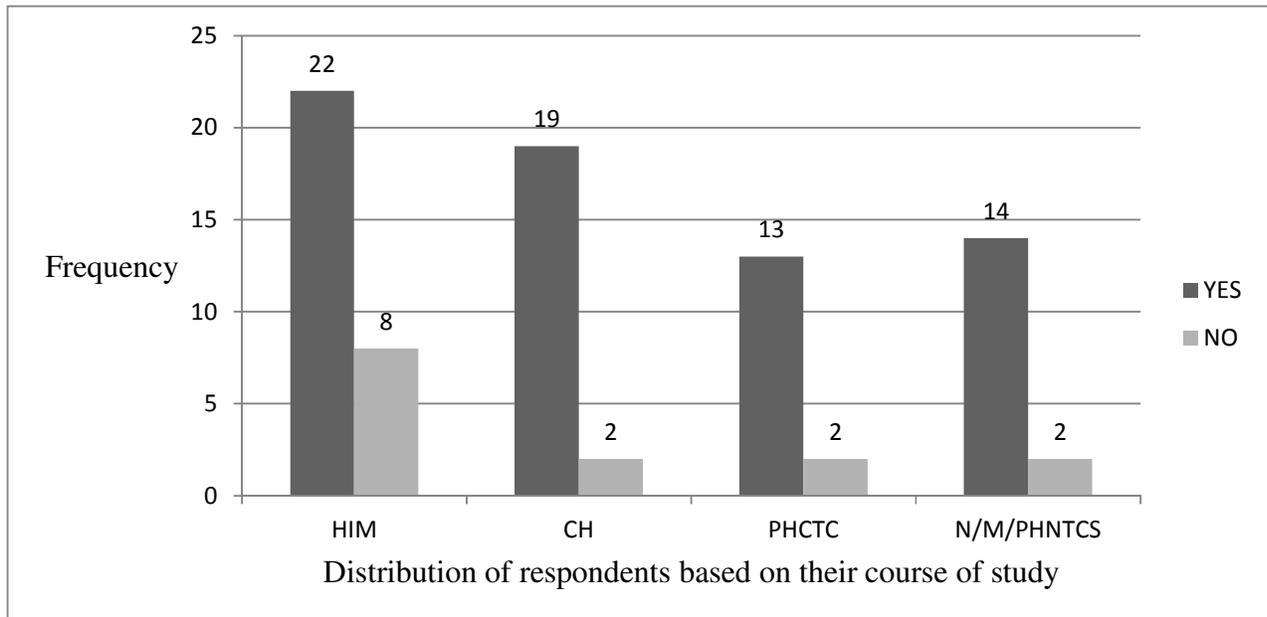


Figure 1: Exposure of respondents to introductory lectures in Oral Health

HIM=Health Information Management; CH=Community Health; PHCTC=Primary Health Care Tutors' Course; N/M/PHNTCS=Nurse/Midwife/Public Health Nurse Tutors' Course

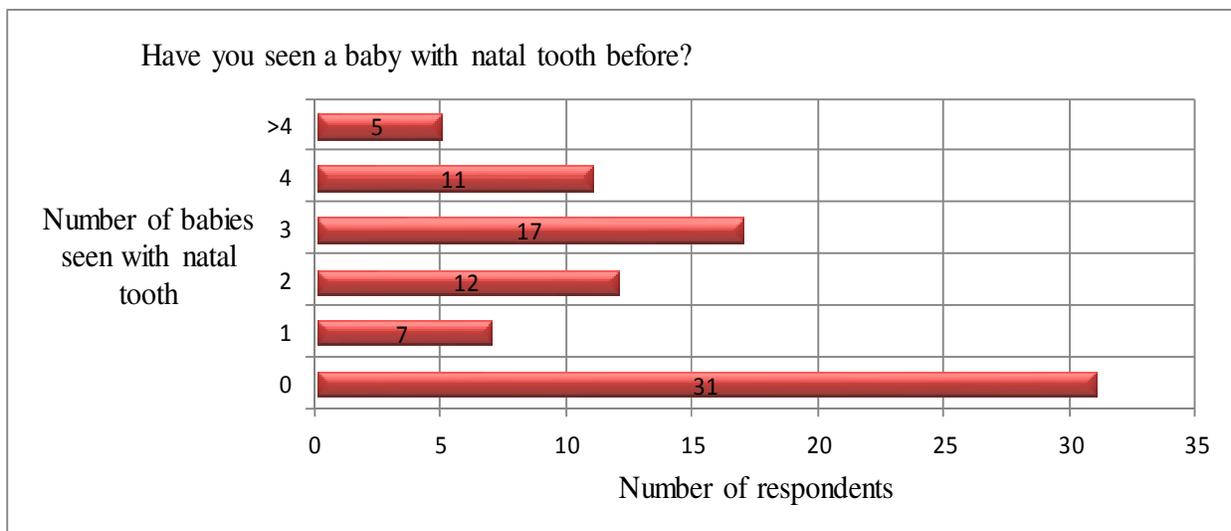


Figure 2: Number of babies with natal tooth seen by the respondents