Mothers Perception of Teething in Children

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ABSTRACT

BACKGROUND
Teething is a physiological process which creates little local discomfort. Mothers ascribe many medical problems to teething despite no evidence to support these belief and misconceptions. The objective of this study was to determine mothers Perception of teething in Children and remedies used to manage them.

METHODS
A descriptive cross sectional study was conducted on a consecutive sample of 408 mothers of children aged 3months-2years. Data was obtained using a self-administered questionnaire for the literate mothers while the investigators marked questions for those who could not read after translating the questions into Pidgin English. The obtained data were analysed using the EPI info version 6.04 and SPSS version 16.0. Statistical significance at 95% confidence interval was p value < 0.05. The chi square test of association was used where appropriate.

RESULTS
About 60% of the mothers were aged between 26-35 years; most mothers (84.3%) perceived teething to be associated with various symptoms while 15.7% did not. The commonest problems reported were fever (63.2%) and diarrhoea (47.5%). There was no statistically significant association between perception of teething problems and education, and age of the mothers. About 42.4% believed the symptoms were not serious and would not take the child to the hospital. Various remedies were used by mothers including 'My Pikin' teething mixture in 13.2% of cases.

CONCLUSION
Mothers beliefs and attitude about teething has serious health implications for management of common childhood illnesses. There is a need for proper oral health education of mothers during the antenatal period to discourage the use of teething as a ready explanation for childhood diseases.

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INTRODUCTION

Teething is the movement of the teeth from the alveolar bone (pre-eruptive position) through the gingival mucosa into the oral cavity.[1] It is the process by which an infant's first teeth appear sequentially by emerging through the gums. The process and timing of teething is considered an important milestone for the child by physicians and especially the parents and soitis eagerly anticipated by them. It may start as early as three monthsto as late as twelve months but usually occurs between six and nine months and continues till the 3rd birthday.[2,3,4]

Teething is a natural physiological process with minimal local disturbance but usually without systemic upset. Reported local disturbances associated with teething includes pain, irritation of the gums, drooling of saliva, swelling of the gums, irritability or

crankiness and a mild rise in temperature[5]. Other noticeable features of teething include; chewing of the finger and toys to pacify the gum and some babies may refuse to eat due to the pain.[4] The pain associated with teething is thought to be due to the swelling of the gums and is more intense with the premolars and molars due to their larger size as they cannot penetrate the gum as easy as the other teeth.[4,5] Also, the level of pain each baby can handle differ from each other while some may be quite fussy others are not bothered by teething.

Several myths about teething and its remedies exist in several cultures from early days. Teething used to be considered (falsely) a cause of death, it was so common to attribute serious diseases to teething that in 1842 teething was said to be the registered cause of death in 4.8% of all infants who died in London under the age of 1 year and 7.3% of those between the ages of 1 to 3 years.[5]In 1910, one thousand six hundred deaths were recorded to be due to teething in England and Wales.[6]While teething is a natural process that causes minimal local discomfort, remedies for teething has caused more harm than the teething process. Old remedies to teething includes blistering, bleeding, placing leeches on the gum, applying cautery to the back of the head and lancing- a method where lancet was used to cut the gum in other for the teeth to appear.[7] It was thought that failure of the teeth to appear was due to lack of a pathway and that this was the cause of death from teething, lancing therefore created that pathway. Teething has not been shown to cause fever and diarrhoea but up until now many parents believe that teething is a cause of several symptoms including fever and frequent stooling.[8]Teething diarrhoea is a myth, according to current medical opinion, yet cross-cultural data show a rife distribution of popular belief in the association of frequent loose stools with teething.[9, 10, 11]While there is some evidence that teething may cause a rise in temperature there is no proof that it causes fever. [12]In Nigeria, a 1991 study reported that 58% of the respondents believed that teething might be accompanied by various local and systemic problems including, fever, diarrhoea and conjunctivitis. [13]while another study in Nigeria in 2005 found that Most of the mothers (95.2%) perceived teething to be associated with various symptoms while only 4.8% did not. The commonest problems reported were fever (90.3%) and diarrhoea (87.3%).[14]These false parental belief about teething may interfere with health seeking behaviour and management of a wide range of serious illnesses which are attributed wrongly to teething. The objective of this study therefore is to determine mothers perceptions about teething and the remedies used during teething.

METHODOLOGY

The study was carried out between October 2013 and February 2014 at the Outpatient Clinic of the Department of Paediatrics, University of Port Harcourt Teaching Hospital, Port Harcourt. Port Harcourt is a cosmopolitan city, diverse Nigerian ethnic groups live in the city, but the indigenous ethnic groups are the Ikwerres, Ijaws, Ogoni, Ekpeyes and the Ogbas. The University of Port Harcourt Teaching Hospital is a tertiary hospital and offers medical services to the host communities, non-indigenes and neighbouring states. It was a descriptive cross sectional study. A consecutive sample of 408 mothers of children aged 3months -2years from different socioeconomic class and educational level who gave verbal consent participated in the study. A self-administered questionnaire was used for the literate mothers while the investigator marked questions for those who could not read after translating the questions into Pidgin English. The obtained data were analysed using the EPI info version 6.04 and Statistical Package for Social Sciences (version 16.0). Statistical significance at 95% confidence interval was p value < 0.05. The chi square test of association was used where appropriate.

RESULT

Table 1 show the socio demographic characteristic of the study population. A total of 408 mothers participated in the survey. Four

(1.0%) mothers were aged 15-20years while122 (29.9%) were aged 30-35years. Two (0.5%) mothers had no formal education, 12 (2.9%) had primary school education while 236 (57.8%) had tertiary education. Majority of the mothers 132 (32.3%) were professionals while 64 (15.7%) were house wives. All the major and some minor Nigerian ethnic groups were represented in the study. One hundred and forty one (34.5%) were Ibos, 87 (21.3%) were From the Ikwerre speaking area of Rivers state, and 50 (12.3%) were Yorubas.

Table: 1 Socio demographic characteristic of the study population.

Socio demographic characteristics	Frequency	Percentage (%)
Mothers age		
15-20yrs	4	1.0
21-25yrs	52	12.7
26-30yrs	118	28.9
30-35yrs	122	29.9
>35yrs	112	27.5
Total	408	100.0
Mothers level of Education		
No formal education	2	0.5
Primary education	12	2.9
Secondary education	158	38.7
Tertiary education	236	57.8
Total	408	100.0
Mother's occupation		
Professionals	132	32.3
Skilled workers	82	20.1
Traders	70	17.2
Unemployed	60	14.7
Housewife	64	15.7
Total	408	100.0
Tribe		
Ibo	141	34.5
Ikwerre	87	21.3
Yoruba	50	12.3
Ijaw	44	10.8
Hausa	30	7.4
Ogoni	26	6.4
Efik/Ibibio	20	4.9
Others	10	2.4
Total	408	100.0

Perception of Teething problems by mothers.

Three hundred and forty four mothers (84.3%) associated teething with various symptoms such as fever, diarrhoea, vomiting, refusal to eat, cough and weight loss, while 64 (15.7%) did not. Most mothers (63.2%) perceived that teething causes fever, 47.5% believed that teething causes diarrhoea, while 12.3% believed that teething causes vomiting. Teething problems perceived by mothers are shown on Table 2.

Table 2: Perception of Teething problems by mothers.

Perceived problems *(Multiple responses)*	Frequency	Percentage (%)
Fever	258	63.2
diarrhoea (Frequent stooling)	194	47.5
vomiting	50	12.3
Loss of appetite (Refusal to eat)	40	9.8
Crying	39	9.3
drooling of saliva	32	7.8
Weight loss	22	5.4
Cough	14	3.4
Convulsion	10	2.5
Runny nose (cold)	8	2.0

The perceived teething problems according to the age and educational level of mothers are shown in Tables 3 and 4. There was no statistically significant association between the age of the mothers (p= 0.259), educational status of mothers (p= 0.792) and the perceived symptoms.

Table 3: Perception of teething problems by age of mothers.

Mothers age	Various problems (%)	No problems (%)	Total (%)	X^2 (*p-value*)
15-20yrs	4 (100.0)	0	4 (100.0)	5.29 (*0.259*)
21-25yrs	36 (69.2)	16 (39.8)	52 (100.0)	
26-30 yrs	100 (84.7)	18 (15.3)	118 (100.0)	
30-35yrs	102 (83.6)	20 (16.4)	122 (100.0)	
>35yrs	102 (91.1)	10 (8.9)	112 (100.0)	
Total	344 (84.3)	64 (15.7)	408 (100.0)	

Table 4: Perception of teething problems according to educational level of mothers.

Education	Various problems (%)	No problems (%)	Total (%)	X^2 (*p-value*)
No formal education	2 (100.0)	0	2 (100.0)	1.04 (*0.792*)
Primary education	10 (83.3)	2 (16.7)	12 (100.0)	
Secondary education	136 (86.1)	22 (13.9)	158 (100.0)	
Tertiary education	196 (83.1)	40 (16.9)	236 (100.0)	
Total	344 (84.3)	64 (15.7)	408 (100.0)	

On the timing of the perceived problems associated with teething, 77.2% of the mothers reported having experienced the onset of symptoms in the children before teething started and 80.8% reported the end of the symptoms after the appearance of the tooth. This is shown in Table 5.

Table 5: Timing of beginning and end of perceived teething problems by mothers

	Before the teeth comes out (%)	As the tooth comes out (%)	After the teeth is out (%)	Total (%)
When do these teething problems begin	310 (77.2%)	86 (21.1%)	7 (1.7%)	408 (100.0)
When do these teething problems end?	20 (4.9%)	58 (14.3%)	330 (80.9%)	408 (100.0)

On the mothers' attitude to teething problems, the symptoms encountered were perceived as serious by 57.6% of the mothers while 42.4% believed they were not serious and would not take the child to the hospital.

On remedies used by these mothers to quail these teething symptom, 140 (34.3%) uses teething powder, 110 (27.0%) do not use any medication, 102 (25.0%) uses Piccan syrup, 54 (13.2%) said they use 'My Pikin' teething mixture while 2 (0.5%) said they would use a pacifier.

DISCUSSION

This study shows that most mothers (84.3%) associated teething with various symptoms. This proportion is lower than the 95.2% reported by Uti et al[2] among mothers in Lagos state in 2005 but higher than the 58.0% reported in an earlier study of teething myths in 1991.[13] In another study among market women in Enugu state, Nigeria, on the perceived causes and management of diarrhoea in young children, teething was perceived as the major cause of diarrhoea by 69.8% -71.9% of the women.[14] This finding which is a misconception by mothers is not only prevalent in Nigeria but is similar to reports from other parts of the world.[8, 15, 16] In Sudan, more than 90% of mothers believed that diarrhoea was caused by teething.[8]These strong mothers' beliefs to associate symptoms to teething is not in tandem with the finding of most recent studies , who did not confirm this strong association and conclude that the symptoms may occur contemporaneously with teething.[17,18]

The onset of teething coincides with the period when maternally acquired passive immunity wanes and these infants are exposed to several diseases which are erroneously attributed to the teething process. Also during teething, children try to pacify the irritating and sometimes painful gums by putting objects into their mouths and by this process acquire varying infections which are erroneously attributed to the teething process by mothers.

This study also shows that this belief of teething problem by mothers is widespread as it was reported by the various educational strata, age groups, occupations and ethnic group of these mothers. However, there was no statistical significant relationship between the age group, educational level of the mothers and teething. This finding is similar to that of Utiet al[2]but differs from an earlier study where there was a statistically significant association between teething problems and educational status.[13]This may be due to the difference in sample size.

Despite the fact that there is no consensus on the signs and symptoms of teething, and that many of the claimed features reported by mothers can be explained by non-teething

aetiologies, many mothers still firmly believe that their children are teething. This is because of the transient nature and close temporal relationship of the features of teething to the pre, peri and post eruptive period of individual teeth. In this study most of the mothers associated onset of teething problems to the pre-eruptive period and the end of symptoms to the post eruptive period, a finding that is supported by Macknin et al[12] who reported that teething was associated with an 8-day window: 4 days before, the day of, and 3 days after emergence of the tooth.

The attitude of mothers in this study to features acclaimed to teething has serious implications as it may interfere with the prompt diagnosis and management of a range of serious illnesses. Diarrhoea, a killer disease and fever are regarded as normal phenomena that must accompany teething and are not viewed as serious enough to warrant medical attention. This is indeed worrisome as serious childhood illnesses, which are unrelated to teething, are likely to be left untreated or may not be given the seriousness they deserve.

This study show that remedies used for teething problems includes teething powders, Piccan syrup, 'My Pikin' teething mixture, and pacifier. These remedies used erroneously by mothers for perceived teething problems are of no benefit and some are harmful to these children like 'My Pikin' teething mixture which contains diethylene glycol has been implicated in the aetiology of acute renal failure in children and was reported nation-wide in Nigeria.[19]

Teething only produces teeth is a common adage used by Paediatricians and Dentists. It is now accepted that the local symptoms associated with teething vary in individuals but do not cause severe systemic upset and where present prompt medical attention should be sought. Therefore, there is a need to know the facts and the false beliefs attributed to teething. Medical professionals need to be educated about teething to provide reasonable explanations to concerned caregivers. Strong parental beliefs which are not borne out by evidence will unlikely change until professionals (most of whom are also parents) change theirs. Teething only produces teeth.

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