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AI Owais
F Zawaideh
O Bataineh

Challenging parents' myths regarding their children's teething

Authors' affiliations:
Arwa I. Owais, *Feda Zawaideh*, *Ola Bataineh*, Pediatric Dentistry Department, Faculty of Dentistry, Jordan University of Science and Technology, Irbid, Jordan

Correspondence to:
Arwa I. Owais, BDS, MS, Dip ABPD, Dip ABDPH
Pediatric Dentistry and Preventive Dentistry Department
Faculty of Dentistry
Jordan University of Science and Technology
PO Box 3030
Irbid, 22110
Jordan
Tel.: +962-795410415
Fax: +962-7201087
E-mail: aowais@just.edu.jo

Abstract: *Objectives:* The aims of this study were to (i) investigate the parental beliefs about teething signs and symptoms, (ii) investigate the parents' practices used to alleviate teething troubles and (iii) provide an educational basis for dental healthcare providers to better educate parents on this subject. *Methods:* A cross-sectional survey was conducted in a random sample of 1500 parents attending Maternity and Child Health Care Centers. The self-administered questionnaire contained three sections: Section I surveyed parents' and their children's demographic characteristics, Section II aimed to assess the general knowledge and beliefs of parents regarding their children's teething. Section III aimed at investigating the practices that the parents would do to manage teething problems and relieve pain. The analysis of data was carried out using spss computer software. Descriptive statistics and Chi-squared test were utilized. *Results:* Almost 75% of the participants incorrectly attributed fever, diarrhoea and sleep disturbances to teething, and more than 50% believed systemic symptoms are not related to the process. More than 50% of the participants allowed their children to bite on chilled objects, (76.1%) used systemic analgesics and (65.6%) rubbed the gums with topical analgesics to relieve the symptoms associated with teething. *Conclusions:* This study shows a common lack of knowledge about teething among parents. Parents should be better educated about the teething process and the proper management of teething troubles by the dental health care providers.

Key words: local; myths; signs; symptoms; systemic; teething

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Introduction

Tooth Eruption (teething) is a normal physiological process defined as the process whereby a tooth moves from its

developmental position within the jaws to emerge into the oral cavity (1–3). Historically, teething has often been blamed for a variety of signs and symptoms when diagnostic ability has failed (4). Over half of the babies are believed to have one or more problems during teething (5). In a retrospective study, mothers of 224 infants reported 74% and 100% of their children to suffer at least one local disturbance during the eruption of the anterior and posterior teeth, respectively (6). In another study, parents completed a questionnaire inquiring about their beliefs and experiences related to teething. It was found that 24% of parents believed that teething could cause fevers higher than 38°C and 10% believed that such fever could be higher than 39°C. Eighty-one percentage of the parents rated infant distress during teething as mild to moderate and 14% as severe (7).

As eruption takes place over a period of two and half years, it is not surprising that these coincidental factors emerge. If attention is given to these symptoms, it is often recognized that some other coincidental mild infection is present, usually gastro-intestinal or upper respiratory tract (8). In a study carried out by Swann (9) who reviewed 50 children admitted to hospital with a presenting complaint of teething, it was found that in 48 children, a medical condition was diagnosed, including one case of bacterial meningitis.

A variety of physical disturbances have historically been attributed to teething including pain, inflammation of the mucous membrane overlying the tooth (possibly with small haemorrhages), general irritability/malaise, disturbed sleep/wakefulness, facial flushing/circumoral rash, drooling/sialorhoea, gum rubbing/biting/sucking, bowel upset (ranging from constipation to loose stools and diarrhoea), loss of appetite/alteration in volume of fluid intake and ear rubbing on the same side as the erupting tooth (4). It is now accepted that the localized symptoms of teething vary between individuals, however, severe systemic upsets are unrelated to teething despite parents' perception and believes (4, 6, 7, 10–15).

In spite of the growing evidence that teething is associated with, at most, minor and relatively infrequent symptoms (7, 10, 11), the distance between research and widely held beliefs and practices is still very large to close. The most robust study from an evidence-base perspective was a prospective study of children aged 6 months to 3 years in three Melbourne long day care centres by Wake *et al.* (7). Every morning for 7 months, parents reported on the presence of a range of common symptoms over the preceding 24 h. Every afternoon for 7 months, carers reported on the same symptoms over that day. In addition, in the middle of each day, a trained dental therapist examined the mouth, recording the presence of any new teeth and the stage of eruption, and checked each child's temperature. The results showed that although parents and carers reported many of the symptoms described above, and many teeth erupted, no confirmation of any temporal relationships between the 'symptoms' and teething was obtained. The study reported no statistical association between fever, mood disturbance, drooling, rashes and tooth eruption. On the other hand, parents were found to follow a pharmacological approach to the management of teething symptoms; 86% reported the use of paracetamol and 52% reported using topical anaesthetic-based teething gels.

The largest prospective cohort study of 125 healthy children with 475 tooth eruptions by Macknin *et al.* (10) showed significant ($P < 0.01$) associations with biting, drooling, gum rubbing, irritability, sucking and temperature >37.5°C. However, attributing these symptoms to teething was not possible as no symptom occurred in >35% of infants during each teething period, and no symptom occurred >20% more often in the teething period than in the non-teething period. Diarrhoea, cough, vomiting, sleep disturbance, facial rashes, fever >38.9°C, or any serious illness were not significantly associated with teething.

A variety of approaches to the symptomatic relief of the discomfort associated with teething have been practiced by caregivers for centuries. Rubbing substances into the gums and chewing on hard objects are very popular practices. Chewing on clean, hard, cool objects as chilled teething rings and rattles, cold wet flannels and chilled hard vegetables may give relief from soreness (14).

In an earlier survey by Wake *et al.* (15), 76% of parents reported using some form of medication to manage teething symptoms, most commonly paracetamol (60%) and/or teething gels (55%). Professionals also reported recommending paracetamol and teething gels widely; of interest, 41% of the pharmacists recommended sedating medication reflecting the time of night they see their 'teething' customers.

Reassurance of the parents regarding teething signs and symptoms by the paediatrician or oral health professional is necessary (16). Steward (17) recommended a sequential approach to the management of teething ranging from giving the child objects to bite on through topical and systemic medications. Biting on these chilled objects may give some relief from soreness by the pressure of biting, or hasten the eruption process. Hard vegetables such as chilled carrots or celery may be used. Teething rusks or biscuit preparations are available, consisting mainly of flour or fat. Care should be taken that these do not contain sugar or sweetening agents.

If the pain is troublesome, the appropriate dose of paracetamol elixir, preferably sugar-free may be given regularly, every

4–6 h. The use of aspirin in either topical or systemic form is contraindicated in children and teenagers due to the association with brain and liver disorder, and Reye's syndrome (16, 17).

If the child is having extreme difficulty, and additional analgesia is required, a non-irritating topical anaesthetic may bring temporary relief due to the rapid washing away from the site of discomfort. Topical medications include gels containing choline salicylate, lidocaine HCl, and powders containing benzocaine and paracetamol should be used with care to prevent the reported iatrogenic oral mucosal trauma (14, 16–18).

Parental false beliefs of the signs and symptoms associated with teething may interfere with the prompt diagnosis and management of a range of serious illnesses. Restlessness and sleeplessness attributed to teething may well prevent parents from implementing behavioural and sleep management strategies, in addition to the more serious consequences of chemical burn, overdose and toxicity due to possible excessive and long-term use of various medications. Therefore, there is a need to draw a line between the facts and the false beliefs attributed to teething. The role of educating parents in this matter is the responsibility of dental health care providers.

Objectives

1 To investigate the parental beliefs about teething signs and symptoms.
2 To investigate the parents' practices used to alleviate teething troubles.
3 To provide an educational basis for dental healthcare providers to better educate parents on this subject.

Material and methods

A national cross-sectional survey was conducted to achieve the objective of this study. The data were collected in a random sample of parents attending Maternity and Child Health Care Centers in Jordan. These centres were selected because they represented the settings where the highest proportions of parents with their children aged 0–3 years received care on a regular basis.

Confidentiality was maintained throughout the study as the questionnaires were anonymous; a system of code numbers was used instead. Parents were eligible to participate if they had healthy children of 0–3 years of age (the active teething stage) (15), with non-contributory medical history.

The survey utilized a self-administered structured questionnaire comprising 33 questions. Once the questionnaire was developed, content and face validity were tested by an advisory committee of primary health care givers (n = 10) and members of the target population (n = 20). Reliability testing was completed with a separate subgroup of the studied sample. Twenty-five parents were asked to refill the questionnaire after a period of 1 week. Reliability testing of the questionnaire was conducted via a test-retest format in which all questions scored a correlation level above 0.7. The questionnaire was then distributed to 1500 parents as the target population.

The Institutional Review Board at the University approved the survey protocol. A cover letter from the research group and a consent form were attached to the questionnaire to provide additional background information about the survey and ask parents kindly to participate in the survey. The questionnaires were distributed and collected on the spot by the distributor.

The questionnaire contained the following three sections:

Section I, composed of seven questions, surveying parents' and their children's demographic characteristics including parent gender, age, employment sector, educational level, monthly family income, number of children in the family and age of the youngest child.

Sections II and III contained multiple choice questions with 'Agree', 'Disagree', 'Do not know' answer choices provided. Section II composed of two parts; the first part contained four questions aimed to assess the general knowledge of parents regarding their children's teething. The second part of this section contained 14 questions aimed to assess the parents' beliefs about teething associated signs and symptoms.

Section III composed of six questions that aimed at investigating the practices that the parents would do to manage teething problems and relieve pain (Table 1).

Respondents were categorized as having either 'good' or 'poor' knowledge about signs and symptoms related to teething. Answering 10 or more of 14 items correctly with regards to the associated signs and symptoms of teething resulted in a 'good' knowledge score, while answering less than 10 out of 14 items correctly resulted in a 'poor' knowledge score.

Statistical analysis

The analysis of data was carried out using Statistical Package for Social Sciences (SPSS) computer software (SPSS 15.0, Inc., Chicago, IL, USA). Descriptive statistics were used to summarize the sample. Responses to the questions were analysed using Chi-squared test to assess the relationship between the knowledge and practices towards teething and demographic characteristics. A significant relationship was assumed to exist

Table 1. **Demographic data of study population**

Demographic Variable		% (n = 958)
Gender	Male	35.8
	Female	64.2
Age	Less than 30 years old	34.0
	30–39 years old	41.3
	40–49 years old	15.6
	50 years old and older	9.1
Employment	Health sector	13.8
	Educational sector	16.6
	Others	14.1
	Unemployed	55.5
Educational level	University	45.5
	High school	37.3
	Primary school	14.1
	Illiterate	3.1
Family income per month	Less than $500	48.1
	$500–1000	33.9
	$1000–1500	14.5
	More than 1500	3.4
Number of children in the family	First child	18.4
	2–4 siblings	37.9
	More than 4 siblings	43.7
Age of the youngest child	Less than 6 months	19.1
	6–12 months	33.2
	13–24 months	32.0
	More than 25 months	15.7

between the groups if the P value was found to be less than 5% ($P < 0.05$).

Results

From the 1500 distributed questionnaires, 134 were excluded by the field worker due to the medical status of the child, leaving a number of 1466 parents of whom 958 questionnaires were used for the purpose of this study**.** Useable surveys were those that met the inclusion criteria and were fully answered by the participants, yielding a response rate of (70%).

Characteristics of the respondents are shown in Table 1. The analysis of the demographic data showed that the majority of the respondents were females (64.2%) with an age range between 30 and 39 years old (41.3%), unemployed (55.5%) and had more than four siblings in the family (43.7%). The demographics also showed that almost half of the study population were university-degree educated (45.5%), and most were from low to middle socio-economic class. In 84.3% of the sample, the age of the youngest child in the family ranged between 6 and 24 months.

Table 2 summarizes parental knowledge regarding teething. A total of 378 (39.5%) of the parents answered all the questions correctly. Another 371 (38.8%) answered 75% (3 out of 4 questions) correctly. The level of knowledge was strongly associated with the number of children in the family ($P < 0.05$).

Table 2 also shows the signs and symptoms believed by parents to be caused by teething. The desire to bite, gum irritation, increased salivation and loss of appetite were correctly chosen by parents as an association with teething. Almost three-fourth of the participants incorrectly attributed fever, diarrhoea and sleep disturbances to teething and more than one half believed systemic symptoms were not related to the process. Of the studied sample, 54.0% had a good knowledge score about the signs and symptoms related to teething leaving (46.0%) with poor knowledge.

Table 3 presents the practices that the parents believed were useful to deal with teething problems. Eighty percentage of parents disagreed with the use of bottle feeding or nursing at night as a measure to control the symptoms of teething. More than half of the participants allowed their children to bite chilled objects, 76.1% used systemic analgesics and 65.6% rubbed the gums with topical analgesics to relieve the symptoms associated with teething. More than 66% of participants gave their children fluids to prevent dehydration and tended to consult a primary health care provider in case of eruption and teething problems.

Cross-tabulation of the results showed the use of bottle feeding or nursing at night as a measure to reduce discomfort associated with teething to be significantly related to the knowledge score with regards to the associated signs and symptoms of teething ($P < .001$). A total of 90.7% of the good knowledge group disagreed on the use of bottle feeding or nursing at night as a measure to reduce discomfort associated with teething**.**

The 'good' knowledge in signs and symptoms was strongly associated with the number of children in the family (P = 0.001), followed by family income ($P < 0.05$), occupation ($P < 0.05$) and parent age ($P < 0.05$) and education level ($P < 0.05$). As an example, 75.0% of the high income people had 'good' knowledge of the signs and symptoms related to teething. As the number of children in the family increased, parents exhibited better knowledge scores; 60.0% of parents with more than four children had a 'good' knowledge score. Younger parents tended to have better knowledge than older parents. Seventy-eight percentage of the parents with 'good' knowledge were found to be younger than 40 years of age.

Educational level also affected the 'good' knowledge score significantly ($P < 0.05$). Among the 'good' knowledge parents, 46% had university degree, 40% had high-school degrees, 11% elementary school education while only 4% were illiterate. Surprisingly, only 45.5% of parents working in the health sector had good knowledge score. On the other hand, cross-tabulation of the results showed that parent gender had no

Table 2. **Parental beliefs regarding teething symptoms**

	Agree, *n* (%)	Disagree, *n* (%)	Do not know, *n* (%)
General knowledge regarding teething			
'Baby teeth' start to erupt around 6–7 months of age	737 (76.9)*	164 (17.1)	57 (5.9)
The first teeth to appear in the mouth are the lower central incisors	780 (81.5)*	127 (13.3)	50 (5.2)
The eruption of teeth is complete at approximately 2 years of age	696 (72.7)*	125 (13.0)	137 (14.3)
Delayed eruption of teeth may be an indication for the presence of systemic disease	608 (63.5)*	209 (21.8)	141 (14.7)
Signs and symptoms believed by parents, to be caused by teething			
Fever	813 (84.9)	136 (14.2)*	9 (0.9)
Diarrhoea	688 (71.8)	211 (22.1)*	53 (5.5)
Sleep disturbance/wakefulness	774 (80.8)	140 (14.6)*	44 (4.6)
Loss of appetite	793 (82.8)*	124 (12.9)	41 (4.3)
Gum irritation	897 (93.6)*	25 (2.6)	36 (3.8)
Desire to bite	923 (96.3)*	21 (2.2)	14 (1.5)
Increased salivation	798 (83.4)*	124 (12.9)	29 (3.0)
Runny nose	264 (27.6)	552 (57.6)*	145 (15.1)
Respiratory system problem	200 (20.9)	570 (59.5)*	188 (19.6)
Skin rash	92 (9.6)	731 (76.3)*	135 (14.1)
Vomiting	207 (21.6)	627 (65.4)*	124 (12.9)
Ear problems	270 (28.2)	551 (57.5)*	137 (14.3)
Convulsions	52 (5.4)	751 (78.4)*	155 (16.2)
Increased susceptibility to other diseases	278 (29.0)	441 (46.0)*	239 (24.9)

*Correct response according to the literature.

Table 3. **Practices by parents to deal with teething problems**

Practice to deal with teething problems	Agree, *n* (%)	Disagree, *n* (%)	Do not know, *n* (%)
A. To relieve pain			
Allow the child to bite on a chilled object	574 (59.9)*	310 (32.4)	74 (7.7)
Allow bottle feeding or nursing at night	108 (11.3)	808 (84.3)*	42 (4.4)
Use systemic analgesics	729 (76.1)*	164 (17.1)	65 (6.8)
Apply topical analgesics to rub the gums	628 (65.6)*	237 (24.7)	93 (9.7)
B. Other practices			
Giving the child fluids to prevent dehydration	671 (70.0)*	117 (12.2)	170 (17.7)
Consultation of a primary health care provider in case of any problems with the eruption of teeth	756 (78.9)*	177 (18.5)	25 (2.6)

*Correct response according to the literature.

significant effect on the knowledge scores of parents regarding the signs and symptoms of teething ($P > 0.05$).

Discussion

The purpose of this study was to evaluate the knowledge, beliefs and practices regarding children's teething among a broad group of parents. An acceptable response rate was obtained. The analysis of the demographic data showed a higher percentage of females among the respondents reflecting the fact that females are the primary caregivers to the infants in most instances. In most of the sample, the age of the youngest child in the family ranged between 6 and 24 months; reflecting the beginning and approximate cessation of the teething period, respectively. The demographics also showed that most of the study population is university-degree educated, which may be the reason for the high knowledge level the participants showed regarding the facts of tooth eruption in children. The level of knowledge was strongly associated with the number of children in the family ($P < 0.05$); as the number of children in the family increased, there was greater knowledge about teething facts, mostly due to experience with their children's teething.

Our study reported a broad range of general signs and symptoms believed by parents to be associated with teething. The majority of the parents had false beliefs or myths regarding the signs and symptoms of teething such as fever (84.9%) and diarrhoea (71.8%). Runny nose, respiratory problems, vomiting and

ear problems were reported by almost one-fourth of the parents surveyed (27.6%, 20.9%, 21.6% and 28.2% respectively), and so was the reporting of increased susceptibility to other diseases (29.0%). Also, skin rash and convulsions were reported to a lesser degree (9.6% and 5.4% of the parents respectively).

In agreement with most of the literature, our study showed that local symptoms including desire to bite, gum irritation and increased salivation were rated in the top three of all other symptoms by the parents (4, 10, 12, 13, 15, 19).

Other studies reported different results with regards to fever, diarrhoea, sleep disturbance and runny nose, believed by 85%, 72%, 81% and 58% of the parents in our study respectively. Wake *et al.* (7) published a community-based survey indicating that 70%, 36%, 78% and 41% of Australian parents believed that teething causes fever, diarrhoea, sleep disturbance and runny nose, respectively (15). In a later prospective cohort study sample, Wake *et al.* reported those beliefs in 48%, 33%, 71% and 43% of the parents pertaining to the same symptoms above, respectively.

Furthermore, Barlow *et al.* (12) reported that 74.6%, 56.7% and 86.7% of parents in Iowa, USA believed that fever, diarrhoea and sleep disturbance were associated with teething, respectively. Finally, based upon the retrospective analysis of records that documented parents' answers regarding the occurrence of teething disturbances in their infants at 2-monthly intervals in Brazil, Cunha *et al.* (19) found that fever, diarrhoea, sleep disturbance and runny noses were reported in 46%, 35%, 39% and 26%; respectively. In general, there was less reporting of these symptoms in most of the abovementioned studies than in this study with exception of sleep disturbances that were reported more by parents in Barlow *et al.* (12) study. Such differences may be related to different cultural beliefs in different parts of the world.

Others reported similar results such as the study by Carpenter (20) and Cunha *et al.* (19) who both reported a definite correlation between the teething process and the occurrence of systemic disturbances such as fever, diarrhoea, rhinorrhea and sleep disturbance. In summary, current belief states that there are side effects from teething, but any real cause-and-effect relationship is doubtful (6–13, 15, 17, 19–22).

One interesting point of the results to discuss is the lower level of knowledge among parents working in the health sector. There is clear evidence in the literature of persistent erroneous beliefs concerning teething among health care professionals (12, 23, 24). Possible explanations may be that curricula in the medical field lack proper information regarding teething, and that people working in the health sector may have a recall bias as they see more children complaining of teething, so they start to believe falsely in the signs and symptoms related to teething.

High temperature (higher than 39°C) should not be attributed to teething and should be investigated (4, 7, 10, 11, 15, 18). If attention is given to these symptoms, it is often recognized that some other coincidental mild infection is present, usually gastro-intestinal or upper respiratory (8). An undiagnosed primary herpetic infection (primary herpetic gingivo-stomatitis) could be responsible for the symptoms of fever, irritability and appetite loss (16).

It is evident that a high percentage of parents believed that the following were useful practices to relieve the pain associated with teething: giving the child a chilled object to bite on, systemic medications and the use of a topical anaesthetic. The results are similar to those in Wake *et al.* (15) study in which 86% of the participants reported the use of paracetamol and 52% reported using topical anaesthetic-based teething gels.

Conclusion

It is time to review our long-held cultural myths and beliefs about teething, to acknowledge that there is good evidence that tooth eruption is not strongly associated with significant symptoms, and to start to manage the issues of late infancy and toddlerhood more effectively. Thus, before attributing any signs or symptoms of a potentially serious illness to teething, primary health care providers and parents must rule out other possible causes.

There is a clear indication of the need to include scientific information on teething in the health educational packages directed at different levels within communities. Parents, who have strong beliefs about teething which are not borne out by evidence, will unlikely change their beliefs until professionals (most of whom are also parents) change theirs. Infant oral health promotion is an important task of oral health professionals as well as all other clinicians. Educating expectant mothers and parents about teething as well as many other issues related to anticipatory guidance is all preventive-oriented and involves patient education, a role that is central to the scope of dental hygiene practice.

Education and oral health promotion has been proven to be effective in many areas of prevention of dental diseases. Further research is required to investigate the role of proper education of professionals and parents especially expectant mothers by health care providers and its effect on eliminating false beliefs regarding teething symptoms to better manage their children's teething problems/symptoms.

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References

1 Berkovitz BKB. How teeth erupt. *Dent Update* 1990; **17:** 206–210.
2 Craddock HL, Youngson CC. Eruptive tooth movement – the current state of knowledge. *Br Dent J* 2004; **197:** 385–391.
3 Kardos TB. The mechanism of tooth eruption. *Br Dent J* 1996; **181:** 91–95.
4 McIntyre GT, McIntyre GM. Teething troubles? *Br Dent J* 2002; **192:** 251–255.
5 AAPD. *Pediatric Dentistry Handbook*. Chicago, AAPD, 1997.
6 Seward MH. Local disturbances attributed to eruption of the human primary dentition. *Br Dent J* 1971; **130:** 72–77.
7 Wake M, Hesketh K, Lucas J. Teething and tooth eruption in infants: a cohort study. *Pediatrics* 2000; **106:** 1374–1379.
8 Birch RH, Huggins DG. *Practical Pedodontics*. Edinburgh, Churchill Livingstone, 1973.
9 Swann IL. Teething complications, a persisting misconception. *Postgrad Med J* 1979; **55:** 24–25.
10 Macknin ML, Piedmonte M, Jacobs J, Skibinski C. Symptoms associated with infant teething: a prospective study. *Pediatrics* 2000; **105:** 747–752.
11 Jaber L, Cohen IJ, Mor A. Fever associated with teething. *Arch Dis Child* 1991; **67:** 233–234.
12 Barlow BS, Kanellis MJ, Slayton RL. Tooth eruption symptoms; a survey of parents and health professionals. *J Dent Child* 2002; **69:** 148–150.
13 Hulland SA, Lucas JO, Wake MA, Hesketh KD. Eruption of the primary dentition in human infants: a prospective descriptive study. *Pediatric Dent* 2000; **22:** 415–421.
14 Ashley MP. It's only teething…A report of the myths and modern approaches to teething. *Br Dent J* 2001; **191:** 4–8.
15 Wake M, Hesketh K, Allen M. Parental beliefs about infant teething: a survey of Australian parents. *J Paediatr Child Health* 1999; **35:** 446–449.
16 Pinkham JR. *Pediatric Dentistry*, 3rd edn. WB Saunders, Philadelphia, 1999, 54–55, 161–171, 195–197.
17 Steward M. Infant care-teething troubles. *Community Outlook* 1988; **May:** 27–28.
18 Wilson PHR, Mason C. The trouble with teething: misdiagnosis and misuse of a topical medicament. *Int J Paediatr Dent* 2002; **12:** 215–218.
19 Cunha RF, Pugliesi DMC, Garcia LD, Murata SS. Systemic and local teething disturbances: prevalence in a clinic for infants. *J Dent Child* 2004; **71:** 24–26.
20 Carpenter JV. The relationship between teething and systemic disturbances. *J Dent Child* 1978; **45:** 381–384.
21 Ten Cate AR, Antonio N. Physiologic tooth movement: eruption and shedding. In: Ten Cate AR, ed. *Ten Cate's Oral Histology: Development, Structure and Function*, 5th edn. Mosby Company, Saint Louis, 1998, 275–298.
22 Behrman RE, Kliegman R, Arvin AM. *Nelson Textbook of Pediatrics*, 15th edn. WB Saunders Company, Philadelphia, 1995, 1039.
23 Wake M, Hesketh K. Teething symptoms. Cross sectional survey of five groups of child health professionals. *BMJ* 2002; **325:** 814.
24 Bankole OO, Denlove OO, Aderinokun GA. Attitude, beliefs and practices of some Nigerian nurses toward teething in infants. *Odontostomatol Trop* 2004; **105:** 22–26.