

Toothache among dental patients attending a Nigerian secondary healthcare setting

Clement Chinedu Azodo, Oritsewemi Ololo

SUMMARY

Introduction. Pain intensity and oral health practices among patients with toothache, a major dental public health problem is necessary information for the formulation of preventive and interventional oral health policies

Objective. To assess the pain intensity and oral health practices among dental patients attending a Nigerian secondary healthcare setting with toothache.

Materials and Methods. This study was a prospective study of adult patients attending the dental clinic of Rasheed Shekoni Specialist Hospital, Dutse, Jigawa State, Nigeria. Interviewer-administered questionnaire which elicited information include demography, pain intensity using visual analogue, tooth brushing behaviour and previous dental treatment was the tool of data collection.

Results. The majority of the respondents were males and young adults. More than half (60.5%) of the respondents reported pain of moderate to severe intensity and 42.6% have engaged in self medication for the toothache. More than one-third (34.2%) had experienced the pain for \geq four weeks and the major factor that prompted the decision to visit dentist were unbearable nature of the pain and sleep disturbances. Almost half (46.2%) of the respondents had previously visited the dentist and the common received treatment was tooth extraction. A total of 57.9% of the respondents indulge in twice-daily tooth cleaning.

Conclusion. Data from this study revealed that respondents with toothache had history of dental visit and visited dental clinic when the pain is unbearable and disturbed sleep. There is a need for proper patient education at any encounter with dentist.

Key words: oral health, pain, patient.

INTRODUCTION

Pain is a common disabling condition with a high impact on health and the health services in the community globally. Untreated pain disrupts numerous aspects of normal physical and psychological life of an individual by affecting eating, dietary choices, speech, sleep, social interactions, productivity at school and workplace. The consequences include nutritional deficiencies, impaired concentra-

tion, sleep deprivation, reduced quality of life and ability to work, social isolation and depression, increased risk of fall and accidents (1, 2).

Orofacial pain is associated with significant disability and exerts substantial detrimental impact on daily life activities, psychological distress level and quality of life (3). Toothache is the most common orofacial pain symptom with adverse impact on the well-being of the adult population qualifying it, as a substantial health problem (4, 5). It has been cited to contribute largely to the incidence of oral impacts on daily performances mainly related to difficulty eating and smiling (6). The likelihood of high levels of pain-related disability has been reported to be higher in toothache than other forms of orofacial pain (7). Toothache experience is known influence the rating of oral health as poor in self reported oral health rating system (8).

Toothache is among the most prevalent of pain complaints among human race and frequently

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given as, a common reason for seeking dental care. It therefore means that dentists are frequently confronted with issues concerning pain, as their patients seek management that integrates oral health with overall well-being (9). It has been proposed as a potential quality indicator reflecting the disparities in the oral health for a population.

Toothache experience triggers different forms of health seeking behaviour depending on the severity and intensity (10). Pain severity and disability have been documented as the most significant clinical factors associated with help-seeking (2). It has also been reported that individuals experiencing toothache use a combination of self-care and formal care strategies with self-care strategies in form of nonprescription medicines, home remedies and prayer initially and but seeking dentist finally for the ultimate pain relief (10). Although variety of tool for assessing pain exist, visual analog scale (VAS) has been found to valid, reliable and appropriate for use in clinical practice (11, 12).

Pain intensity and oral health practices among patients with toothache, a major dental public health problem is important information for the formulation of preventive and interventional oral health policies. Hence the information on toothache from northern part of Nigeria is necessary to complement the available information on toothache from southern part of Nigeria. The purpose of the study was to assess the pain intensity and oral health practices among dental patients attending a Nigerian secondary healthcare setting in northern Nigeria with toothache.

MATERIALS AND METHODS

This study was a prospective study of adult patients attending the dental clinic of Rasheed Shekoni Specialist Hospital, Dutse, Jigawa State, Nigeria. Interviewer-administered questionnaire which elicited information include demography, pain intensity using visual analogue, tooth brushing behaviour and previous dental treatment was the tool of data collection.

The research protocol was reviewed and approved by the Research and Ethics committee of Rasheed Shekoni Specialist Hospital, Dutse, Jigawa State. The obtained data were subjected descriptive statistics in form of frequencies and percentages using the Statistical Package for the Social Sciences (SPSS) version 17.0. The pain intensity using visual analogue was consequently graded as mild, moderate and severe. The occupation of the respondents was used to categorise them into four social classes

using Classification modified by Arowojolu (2001) (13) The social class stratification is as follows:

I Executive managers, Company Directors, Professionals (Doctors, Lawyers, Engineers), University Professors, Traditional Chiefs.

II Civil servants, nurses, professional teacher, secretaries, Clergymen, Businessman and pensioners.

III (Semi-Skilled) – Tailors, Bricklayers, Carpenters, Typists, Sewing Mistresses, Clerk, Housewife.

IV (Unskilled) – Messengers, Roadside traders, Cleaners, Night-guards, Farmers.

RESULTS

Age distribution of the respondents were as follows: ≤ 20 years – 18 (7.9%), 21-30 years-117 (51.3%), 31-40 years – 45 (19.7%), 41-50 years – 27 (11.8%) and 51-60 year – 21 (9.2%). The majority of the respondents were males-138 (60.5%) while the remaining 90 (39.5%) were females. The respondents according to social class categorization were class I-18 (7.9%), class II-78 (34.2%), class III-87 (38.2%) and class IV-45 (19.7%). Tobacco use was reported among 2.6% of the respondents. Almost half 105 (46.2%) of the respondents had previously visited the dentist and the most common received treatment was tooth extraction – 63 (60.0%). Other received treatment include filling – 18 (17.2%), scaling and polishing – 12 (11.4%), drug – 12 (11.4%). A total of 132 (57.9%) of the respondents indulge in twice-daily tooth cleaning while 78 (34.2) and 18 (7.9%) cleaned their teeth once-daily and on irregular basis respectively. The major source of pain was from the teeth. In this study, more than half (60.5%) of the respondents reported pain of moderate to severe intensity and more than one-third (34.2%) had experienced the pain for \geq four weeks (Table 1). A total of 129 (56.6%) of them have engaged in self medication for the toothache before seeking professional dental care. Analgesic in form of paracetamol and herbal medications constituted were used by 96 (42.1%) and 12 (5.3%) of the respondents respectively. Others include amoxicillin-39 (17.1%), tetracycline – 9 (3.9%) and *tough and go* – 3 (1.3%). The majority 114 (88.3%) got their drugs from the chemist, native doctor – 6 (4.7%), relative – 6 (4.7%) and drug at home – 3 (2.3%). In terms of effect of the self medication, a total of 111 (86.0%) reported only temporary relief, 12 (9.3%) reported no relief and 6 (4.7%) unspecified the effect of the self medication. The major factor that prompted the decision to visit dentist were unbearable nature of the pain

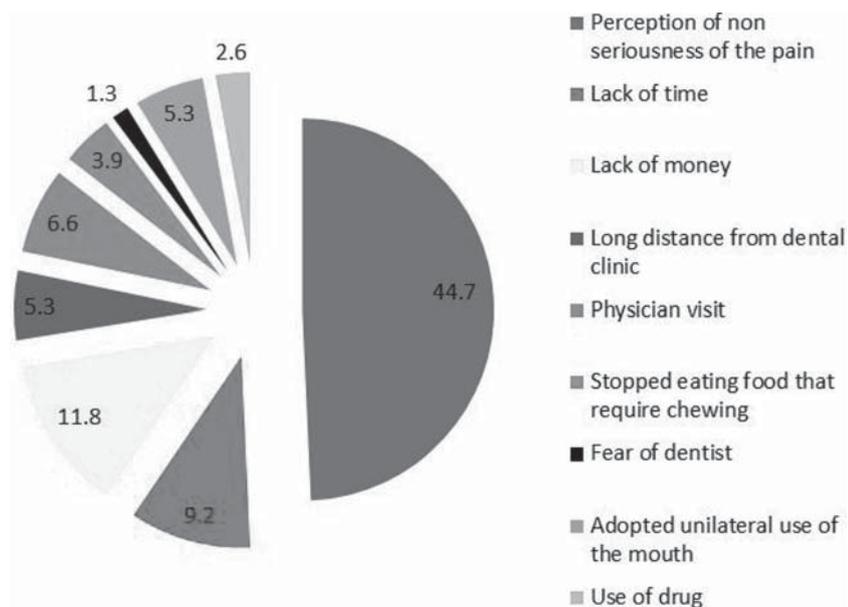


Fig. 1. Factors that delayed seeking dental visit for toothache among respondents

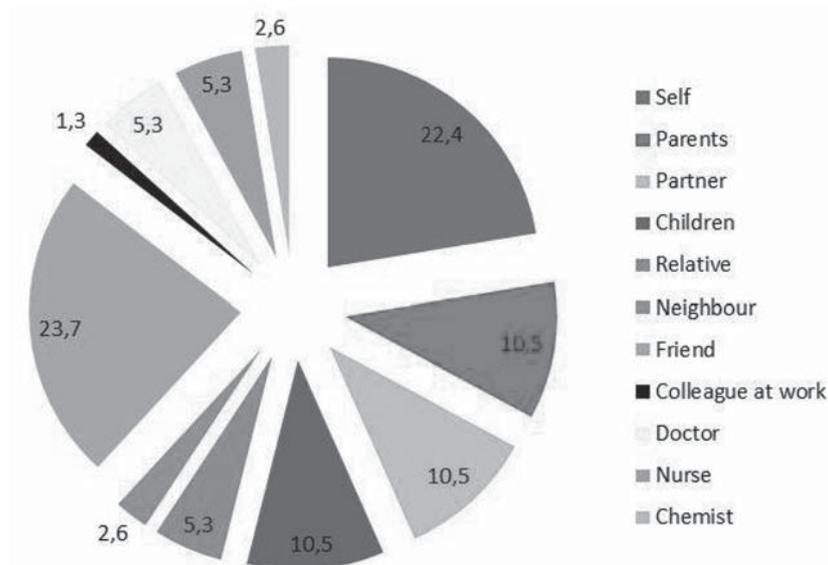


Fig. 2. Predental consultation source of advice on the toothache among the respondents

Table 1. Pain intensity and duration of pain among the respondents

Characteristics	Frequency	Percent
Pain intensity		
Mild	84	36.8
Moderate	60	26.3
Severe	84	36.8
Pain duration		
<1 week	105	46.1
1-3 weeks	39	17.1
1-3 months	45	19.7
>3 months	39	17.1
Total	228	100.0

Table 2. Reason that prompted the decision to seek dental treatment for toothache among the respondents

Characteristics	Frequency	Percent
Unbearable pain		
Sleep disturbances	66	28.9
Trismus	12	5.3
Needed permanent solution	12	5.3
To get better treatment		
Recurrence of pain	3	1.3
Inability to chew well	3	1.3
Discomfort	3	1.3
Available opportunity	3	1.3
Total	228	100.0

and sleep disturbances (Table 2). A total of 22.4% of the respondents did not discuss the toothache with anybody. The sources of advice among the respondents were from family partner among 31.5% of the respondents (partner – 10.5%, parents 10.5% and children – 10.5%), friend (23.7%) and other health worker 10.6% (nurse 5.3% and doctor 5.3%) (Figure 2).

DISCUSSION

Toothache experience varies with age, gender, race, education attainment, family earning and social habits (14). In this study, 70% of the respondents were young adults (21-40 years). This is similar to Bastos *et al.* (14) and Omitola and Arigbede (2010) (15) findings of more likelihood of toothache experience among younger individuals. This can be explained by the changing trend of oral diseases with increasing prevalence of dental caries, the predominant cause of toothache among young adults in Nigeria due to cariogenic dietary and snacking behaviour.

In this study, majority of the respondents were males. This contrasted with the findings of previous studies in southern part of Nigeria which revealed fewer males than females reported toothache (15, 16). The predominance of males reporting for toothache in this study may be linked with the cultural and religious

inhibition of women in the northern Nigeria where the study was conducted (17).

More than half of the respondents were in the social class III and IV which is a reflection of higher prevalence of oral diseases among the poorer individuals in the society. In a review of dental pain by Pau *et al.* (18) found that individuals from lower socio-economic groups were more likely to report dental pain. Tobacco use was reported among 2.6% of the respondents. This is lower than 4.2% and 4.25% reported among patients attending a tertiary dental healthcare setting in southern part of Nigeria (19, 20). A total of 57.9% of the respondents indulge in twice-daily tooth cleaning which is the recommended frequency of tooth cleaning that plays significant role in prevention of oral diseases. Though not assessed in this study, it is possible that the respondents increased their frequency of tooth cleaning in order to ameliorate their condition or that they do employ proper tooth cleaning technique.

The use of dental service in the previous year has been documented as a protective factor for toothache (21) Zheng *et al.* (22) reported that more frequent dental attendance for check-up is one of the factors significantly related to the increased likelihood of treatment-seeking. Almost half (46.2%) of the respondents had previously visited the dentist and the commonly received treatment was tooth extraction. Dental attendance offers patients opportunity to learn preventive oral health information which they might be lacking because toothache is associated with avoidable pathological factors. However the predominance of episodic problem oriented pattern of dental visit in Nigeria explained why majority of respondent that have visited the dentist previously had extraction as their treatment. The source of the toothache was from the tooth which is in tandem with the fact that the presence of cavity/decayed tooth' was cited as the most common cause of oral pain (15, 23).

The health seeking behaviour for pain among individuals varies with the intensity of pain. Pain severity and disability have been documented as the most significant clinical factors associated with help-seeking (2). Cohen *et al.* (1) reported severity of the pain as the main reason for eventual dental care seeking. In this study, more than half (60.5%) of the respondents reported pain of moderate to severe intensity and more than one-third (34.2%) had experienced the pain for \geq four weeks. This is comparable with previous study finding in Nigeria where slightly more than half of patients presented with one month of the dental pain experience (15). The high proportion of respondents seeking care

with moderate to severe intense pain reflected greater acceptance of pain among the studied group. Although, the receipt of care at the dental office is the most preferable option for care for toothache, most individuals face multiple barriers including the cost of dental care which results in long delays in seeking dental care (1). Stoller *et al.* (24) reported that only about one-half of patients contacted the clinic within several days of the onset of their pain despite understanding that their condition is not self-limiting. In this study, the reasons for delay in professional dental seeking care for the toothache among the respondents included perception of non seriousness of the pain, lack of time and money, long distance from dental clinic, stopped eating food that require chewing, adopting unilateral use of the mouth, fear and use of drug. Physician visit for toothache was also noted in this study. Emergency Departments and physicians visit for temporary relief and eventual dental visit for definitive resolution of toothache has been reported (25). These findings are displays of pain-coping strategies for toothache among the studied dental patients. These findings may be related to more effective pain-coping strategies and greater acceptance of pain in the ethnic groups in northern Nigeria when compared to other ethnic groups.

The wait before seeking professional dental attention has been linked with the utilization of one or more lay management strategies which includes self medication, may contribute to the delaying seeking care (24) As about half (42.1%) of the respondents in this study have been engaged in self medication for the toothache before seeking treatment. However, these drugs for self medication sourced predominantly from roadside chemist resulted in only temporary relief among the majority of the respondents (86.0%). This signifies that self medication is not capable of totally resolving toothache thereby confirming the limited and uncertain benefit of self care strategies in toothache (1). Previous study in Cameroon revealed that toothache was the most frequently self medicated oral health problem (26) Self medication for the toothache were in form of analgesics, antibiotics, herbal medication and unorthodox drug ("touch and go"). The connection between pain intensity as a significant predictor of perceived need for pain medication revealed why analgesics was the most common used drug for the self medication (27).

Professional treatment seeking for orofacial pain is more likely among those worrying about their oral and dental health (28). In this study, the major factor that prompted the decision to visit

dentist were unbearable nature of the pain and sleep disturbances. Previous study in southern Nigeria reported more than half of patient seeking care for oral pain had sleep disruptions and in severe agony (15, 29). This is consistent with report in the literature as sleep disturbance has been cited as one of the most common behavioral impacts of toothache (28). Cohen *et al.* (1) reported severity of pain as main reason for eventually seeking dental care for toothache.

Dental and facial pain imposes a significant burden on the community (30). The sources of advice among the respondents were from family among 31.5% of the respondents (partner – 10.5%, parents 10.5% and children – 10.5%), friend (23.7%) and other health worker 10.6% (nurse 5.3% and doc-

tor 5.3%). Similarly in a previous study, 89.3% of patients reported communicating with different persons for advice on oral pain before seeking professional dental care (29). This discussion on toothache in an attempt to find the best and lasting solution to it may be due to the psychological impact of pain in the form of worry or concern among individuals which has reported in the literature.

CONCLUSION

Data from this study revealed that respondents with toothache had history of dental visit and visited dental clinic when the pain is unbearable and disturbed sleep. There is a need for proper patient education at any encounter with dentist.

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