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Nigerian Journal of Periodontal Research (NJPR) is a peer reviewed scientific publication of Periodontologists Association of Nigeria (PAN). This Journal will publish original clinical and basic investigations, review articles and case reports concerned with every aspect of periodontology and related sciences like Implantology etc. Reports of scientific meetings in periodontology and related fields are also welcomed.

Aims and Scope

Nigerian Journal of Periodontal Research is a journal whose aim is to publish original clinical and basic investigations, review articles and case reports concerned with every aspect of periodontology and related sciences like Implantology etc.. Reports of scientific meetings in periodontology and related fields are also published. One volume of two issues will be published annually and this may be reviewed from time to time.

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Pattern and Grading of Pain among Patients Attending the Periodontology Clinic in a Tertiary Hospital in Nigeria

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ABSTRACT

Objective: To assess the pattern and grading of pain among patients presenting at the preventive dentistry clinic, UPTH using the Numeric rating scale (NRS). It also aims to compare the participants' pain response on NRS to their response on Verbal rating scale (VRS).

Methods: This was a descriptive, cross-sectional study conducted among consecutive patients who presented with dental pain at the preventive dentistry clinic, UPTH. A self-administered questionnaire was used to obtain information on sociodemographic, grading of pain using the NRS and VRS. The Numeric rating scale is a unidimensional pain, with a 11-point numeric scale ranging from '0' representing 'no pain' to '10' representing the other pain extreme ('pain as bad as you can imagine' or 'worst pain imaginable'). The Verbal rating scale, also a unidimensional pain scale, consists of a number of descriptors designed to describe pain intensity and duration, the most common descriptors used are "no pain", "mild pain", "moderate" and "severe or intense pain". In this study, NRS score 0 cm was categorized as no pain, 1-3cm mild pain, 4-6cm moderate pain and 7-10cm severe pain. Statistical analysis was done using the Statistical Product and Service Solution, SPSS version 25.0. Statistical significance was considered at $p \leq 0.05$.

Results: One hundred and forty-five participants were enrolled into the study, comprising of 87 (60.0%) females and 58 (40.0%) males. Age range of the participants was 17-82 years with mean age of 39.79 ± 16.79 years. Participants within the 20-29 years age group (52.3%) presented more with NRS pain score 7-10 (severe pain). 37(42.5%) and 39(44.8%) of the female participants presented with pain score NRS 4-6 (moderate pain) and NRS pain score 7-10 (severe pain) respectively. More of the participants in the lower social class (49.3%) presented with NRS pain score 7-10 (severe pain). Participants who had visited the dental clinic 6-12 months ago (45.5%), and >12 months ago (47.1%), presented with NRS pain score 7-10 (severe pain). Chronic periodontitis ($n=55$) was the most common clinical diagnosis among the participants, with a female predominance (67.3%). 47.3% of participants with chronic periodontitis had NRS pain score 7-10 (severe pain). The lower left quadrant (26.21%) was the most common quadrant with pain. There was a strong, positive, and significant correlation between the NRS and the VRS pain assessment instruments (Spearman's rho rank correlation = 0.757; 95% CI: 0.677 – 0.819, p value <0.0001).

Conclusion: Numeric rating scale pain score 7-10, was associated with 20-29 years age group, female gender, lower socioeconomic class and previous dental visits ≥ 6 months. Chronic periodontitis was the commonest cause of pain and the lower left quadrant was the most commonly affected quadrant. There was a strong, positive and significant correlation between the NRS and VRS.

Keywords: Grading, Numeric rating scale, Pain, Pattern, Verbal rating scale

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CLINICAL IMPLICATIONS

Dental pain is a common complaint among patients visiting the dental clinic. Dental patients present to the clinic with pain of varying intensity. Pain assessment is imperative to identify the nature and severity of the disease, which will aid in the diagnosis and effective management of the condition. Using appropriate pain measurement tools can achieve accurate pain assessment. These tools can be unidimensional or multidimensional scales.

INTRODUCTION

Pain is a common symptom patients present with at the dental clinic.¹ The International Association for the Study of Pain (IASP) described pain, as an unpleasant sensory and emotional experience associated with, or resembling that associated with actual or potential tissue damage or described in terms of such damage.² Pain has been labelled the fifth vital sign (P5VS) in humans,³ the other four vital signs are blood pressure, temperature, pulse and respiration.

Perception of pain intensity varies between patients, as it depends on the patient's pain threshold. Due to the challenges in determining the character and intensity of pain among patients, as well as monitoring the effectiveness of and response to treatment,⁴ assessment of pain is therefore essential for appropriate and effective pain management.⁵ Pain measurement tools have been developed to assess pain and include unidimensional and multidimensional scales. Unidimensional scales are commonly used to rate the intensity of pain,⁶ they use words, images or descriptors to measure pain or pain relief. Examples of unidimensional scales include Numeric rating scale (NRS), Verbal rating scale (VRS), Visual analogue scale (VAS), Heft-parker visual analogue scale (HPS), Faces pain scale (FPS), Wong-Baker faces pain rating scale (WBS) and Full cup test (FCT).⁵ Unidimensional scales, however, do not consider the impact of chronic pain on the patient's daily life.⁷ Hence, multidimensional scales

of pain were developed, and these include McGill pain Questionnaire (MPQ), Short form of the McGill pain Questionnaire (SF-MPQ), and Wisconsin brief pain Questionnaire (BPQ). They measure pain intensity as well as sensorial, affective and emotional aspects of pain, but are not commonly used in clinical settings.⁸ One limitation of multidimensional scales is that they rely on patients' memory for measurement of change in pain over time.⁹ A third type of pain scale is the observational pain scoring system, which has been validated in patients who are unable to report their pain level, such as children, critically ill, intellectually disabled and dementia patients.¹⁰ Examples of such are the Critical Care pain Observation Tool (CPOT) and the behavioural pain scale (BPS).

Numeric rating scale (NRS) is one of the most common pain scales used on patients.¹¹ It is an 11-point numeric scale ranging from '0' representing 'no pain' to '10' representing the other pain extreme ('pain as bad as you can imagine' or 'worst pain imaginable'),^{12, 13} It is generally accepted as a useful tool for assessing pain for the following reasons: It takes less than 1 minute to complete, it is easy to administer and score,¹⁴ it can be used internationally without translation difficulties, it is a valid and reliable scale to measure pain intensity,¹⁵ and it can be administered both verbally and graphically.¹¹ However, NRS has the following demerits; it evaluates only one component of the pain experience and intensity, it does not factor in past pain experiences, it does not consider fluctuation in pain¹² and it only evaluates pain experienced in the last 24 hours or "an average pain intensity".

Verbal rating scale (VRS) is an important tool used to assess pain episode, it is also known as verbal pain score or verbal descriptor scale. It consists of a number of descriptors designed to describe pain intensity and duration.¹⁶ Such descriptors help both patients and clinicians to appreciate the nature of both acute and chronic pain, leading to successful pain assessment and medication management. The

most common descriptors used are “no pain”, “mild pain”, “moderate” and “severe or intense pain”.¹⁷ It has been reported to correlate with other pain assessment tools.¹³ However, the verbal rating scale has some limitations: the differences between each descriptor are not considered to be equal (e.g., difference in pain magnitude between moderate and severe, may not be equal to the difference between no pain and mild pain),¹⁹ the interpretation of the pain descriptors can be under or overestimated by some patients, such as younger children. People with limited vocabulary may be unable to read and interpret the words used, as they may not find the exact words to reflect their pain experience.²⁰ A previous study by Brunelli et al,²¹ reported that VRS and NRS had similar reliability when applied to background pain assessment, but NRS had greater sensitivity and more reliable than VRS in measuring pain peaks, in a cross sectional Italian multicentre study comparing numerical and verbal rating scales in the measurement of pain exacerbation in patients with chronic cancer pain.

Even though most patients present to the dental clinic because of pain, there is paucity of literature on the pattern and grading of dental pain among dental patients in University of Port Harcourt Teaching Hospital. Hence, this study aims to assess the pattern and grading of pain among patients presenting at the preventive dentistry clinic, University of Port Harcourt Teaching Hospital (UPTH) using the Numeric rating scale (NRS), Also to compare the participants’ pain response on NRS to their response on Verbal rating scale (VRS).

MATERIALS AND METHODS

This was a descriptive, cross-sectional study conducted among consecutive patients who presented with dental pain at the Preventive Dentistry clinic of the University of Port Harcourt Teaching Hospital (UPTH), Port Harcourt, Rivers State. Ethical approval was obtained from the Health Research and Ethics Committee of the Institution (UPTH/ADM/90/S.II/VOL.XI/1219). The study was conducted between January 2021 and June 2021. Patients were included if they had dental pain, and were at least 17 years old. Consent was obtained from each participant before being enrolled into the study. One hundred and forty-five (145) patients presented with dental pain during the period of this study. Data was collected using a semi-structured, self-administered questionnaire which had two sections.

Section A included information on socio-demographic characteristics (age, gender, marital status, occupation) and previous dental visit in the last 12 months, while section B included information on pain (duration of pain, tooth/teeth affected, description of pain, and intensity of pain). Underlying diagnosis for the pain was made after history taking, intraoral clinical and radiographic examination. Self-reported pain assessment was done by each patient using the Numeric Rating Scale (NRS) and the Verbal Rating Scale (VRS).

In this study, NRS score 0 cm was categorized as no pain, 1-3cm mild pain, 4-6cm moderate pain and 7-10cm severe pain.²² The socioeconomic status of the participants in this study was stratified into 6 classes based on the participants’ occupation and highest educational attainment, into upper class (scores 1 and 2), middle class (scores 3 and 4) and lower class (scores 5 and 6).²²

Data analysis: Statistical analysis was done using the Statistical Product and Service Solution, SPSS version 25.0 (IBM SPSS Inc. Chicago, Illinois). Categorical variables were expressed as frequencies with accompanying percentages. NRS scores were cross-tabulated against patient’s age, gender, social class and clinical diagnosis. Chi square test was used to determine the association between the categorical variables with $p \leq 0.05$ considered statistically significant. Correlation between NRS and VRS was done using the Spearman’s rho correlation.

RESULTS

Socio-demographic characteristics of the participants

One hundred and forty-five participants were enrolled into the study, 87 (60.0%) were females while the remaining 58 (40.0%) were males. The age range of participants was 17-82 years with mean age of 39.79 ± 16.79 years. About 46.2% of the participants were married, while 46.9% were single. Majority had tertiary education (71.0%), and 52.4% of the participants were of the middle class (Table 1).

Level of pain using the numeric rating scale (NRS) across age, gender, social class and dental visits

Participants within the 20-29 years age group (52.3%) presented more with NRS pain score 7-10 (severe pain). 37(42.5%) and 39(44.8%) of the female participants presented with pain score NRS 4-6 (moderate pain) and NRS pain score 7-10 (severe pain) respectively, compared with their male

counterparts. This finding was, however, not statistically significant. More of the participants in the lower social class (49.3%) presented with NRS pain score 7-10 (severe pain) while the participants in the middle social class (46.1%) presented with NRS pain score 4-6 (moderate pain). Participants who had visited the dental clinic >12 months ago (47.1%), presented more with NRS pain score 7-10 (severe pain), while those that visited the dental clinic between 6-12 months ago (45.5%), had NRS pain score 4-6 (moderate pain) and NRS pain score 7-10 (severe pain). This finding, however, was not statistically significant. (Table 2). About 44 (30.4%) participants had pain for up to 1 week before

presenting at the dental clinic, 37 (25.5%) between 2 weeks to 1 month, 27 (18.6%) between 1 and 3 months, 16 (11.0%) for 4-6 months, 20 (13.8%) had pain for more than 6 months, while 1 participant (0.7%) gave no response. About 57(39.3%) of the participants did not use any medication to relieve the pain, while 88 (60.7%) used medications to relieve pain; in form of analgesics only (39.3%), analgesics and antibiotics (9.0%), analgesics and vitamin c (0.7%), antibiotics alone (1.4%), herbal medications (4.8%), TCP (0.7%), Touch & go (0.7%), vitamins C alone (1.4%) and warm saline solution (0.7), while 3 participants (2.1%) were not sure of the type of the medication taken.

Table 1: Sociodemographic characteristics of participants

Variables		n(%)
Age group (years)	<20	10(6.9)
	20-29	44(30.3)
	30-39	28(19.3)
	40-49	23(15.9)
	50-59	16(11.0)
	60-69	13(9.0)
	70-79	10(6.9)
	80-89	1(0.7)
Gender	Female	87(60.0)
	Male	58(40.0)
Marital status	Married	67(46.2)
	Single	68(46.9)
	Widow	10(6.9)
Education	Primary	5(5.5)
	Secondary	34(23.4)
	Tertiary	103(71.0)
Social Class	Lower class	69(47.6)
	Middle class	76(52.4)
Total		145(100.0)

Distribution of clinical diagnosis based on age group of participants

Chronic periodontitis (n=55) was the most common single clinical diagnosis among the participants. Considering the age groups, about half of the participants within the <29 years (41.7%) and 30-49 years (50%) age groups had dental caries. 38.2% of those in the 30-49 years age group presented with chronic periodontitis. Majority of the participants (75%) in the <29 years age group had pericoronitis. For the multiple diagnosis, chronic periodontitis and dentine hypersensitivity were the most common among the participants. (Table 3)

Gender distribution of clinical diagnosis

Majority of the female participants (67.3%) presented with chronic periodontitis, while 54.2% of the male participants presented more with dental caries. This finding is not statistically significant. (Table 4)

Grading of clinical diagnosis using the Numeric Rating Scale (NRS)

More of the participants, (40%) and (47.3%) who presented with chronic periodontitis had NRS pain score 4-6 (moderate pain) and NRS pain score 7-10 (severe pain) respectively. 37.5% of those who presented with dental caries had NRS pain score 1-3 (mild pain), while 29.2% of those with dental caries presented with NRS pain score 7-10 (severe pain).

68.8% of the participants, who presented with pericoronitis had NRS pain score 7-10 (severe pain). Majority of the participants with multiple clinical diagnosis had NRS pain score 7-10 (severe pain). These findings, however, were not statistically significant. (Table 5)

Distribution of dental pain across tooth quadrants

With respect to quadrant of pain, the lower left quadrant was the most common quadrant with 38

(26.21%) cases, followed by the lower right quadrant with 32 (22.07%) cases, while the upper & lower quadrants had 14(9.68%) cases. (Figure 1)

Correlation between NRS and VRS

There was a strong, positive, and significant correlation between the NRS and the VRS pain assessment instruments (Spearman's rho rank correlation = 0.757; 95% CI: 0.677 – 0.819, p value <0.0001). This is as shown in Table 6

Table 2: Level of pain using the numerical rating scale across age, gender, social class and dental visits

		Numeric Rating Scale (Pain score)			Total n(%)	p-value
Variable		1-3 (mild) n(%)	4-6 (moderate) n(%)	7-10 (severe) n(%)		
Age group (years)	< 20	1(10.0)	5(50.0)	4(40.0)	10(100.0)	0.280 [#]
	20-29	5(11.4)	16(36.4)	23(52.3)	44(100.0)	
	30-39	9(32.1)	11(39.3)	8(28.6)	28(100.0)	
	40-49	3(13.0)	14(60.9)	6(26.1)	23(100.0)	
	50-59	1(6.3)	8(50.0)	7(43.8)	16(100.0)	
	60-69	2(15.4)	3(23.1)	8(61.5)	13(100.0)	
	70-79	1(10.0)	4(40.0)	5(50.0)	10(100.0)	
	80-89	0(0.0)	1(100.0)	0(0.0)	1(100.0)	
Gender	Female	11(12.6)	37(42.5)	39(44.8)	87(100.0)	0.533
	Male	11(19.0)	25(43.1)	22(37.9)	58(100.0)	
Social class	Lower	8(11.6)	27(39.1)	34(49.3)	69(100.0)	0.205
	Middle	14(18.4)	35(46.1)	27(35.5)	76(100.0)	
Dental visit (months)	None	11(19.0)	26(44.8)	21(36.2)	58(100.0)	0.760
	<6	3(20.0)	5(33.3)	7(46.7)	15(100.0)	
	6-12	2(9.1)	10(45.5)	10(45.5)	22(100.0)	
	>12	6(11.8)	21(41.2)	24(47.1)	51(100.0)	

- Fisher's exact

Table 3: Distribution of clinical diagnosis based on age group

Variable		Age Group (years)				Total n(%)	p value
No of Clinical Diagnosis	Clinical Diagnosis	≤ 29 n(%)	30-49 n(%)	50-69 n(%)	≥ 70 n(%)		
SINGLE	Dental caries	10(41.7)	12(50.0)	2(8.3)	0(0.0)	24(100.0)	<0.001 ^{*#}
	Chronic periodontitis	12(21.8)	21(38.2)	16(29.1)	6(10.9)	55(100.0)	
	Dentine hypersensitivity	4(21.1)	8(42.1)	4(21.1)	3(15.8)	19(100.0)	
	Pericoronitis	24(75.0)	7(21.9)	1(3.1)	0(0.0)	32(100.0)	
MULTIPLE	Chronic periodontitis & dental caries	1(16.7)	2(33.3)	2(33.3)	1(16.7)	6(100.0)	
	Dental caries & dentine hypersensitivity	0(0.0)	0(0.0)	1(100.0)	0(0.0)	1(100.0)	
	Chronic periodontitis & pericoronitis	1(100.0)	0(0.0)	0(0.0)	0(0.0)	1(100.0)	
	Chronic periodontitis & dentine hypersensitivity	1(16.7)	2(33.3)	2(33.3)	1(16.7)	6(100.0)	
	Chronic periodontitis, dental caries & dentine hypersensitivity	1(100.0)	0(0.0)	0(0.0)	0(0.0)	1(100.0)	

*- significant # - Fischer's exact

Table 4: Gender distribution of clinical diagnosis

Variable		Gender		P value
No of Clinical Diagnosis	Clinical Diagnosis	Female n(%)	Male n(%)	
Single	Dental caries	11(45.8)	13(54.2)	0.322 [#]
	Chronic periodontitis	37(67.3)	18(32.7)	
	Dentine hypersensitivity	10(52.6)	9(47.4)	
	Pericoronitis	20(62.5)	12(37.5)	
Multiple	Chronic periodontitis & dental caries	5(83.3)	1(16.7)	
	Dental caries & dentine hypersensitivity	0(0.0)	1(100.0)	
	Chronic periodontitis & dentine hypersensitivity	3(50.0)	3(50.0)	
	Chronic periodontitis & pericoronitis	1(100.0)	0(0.0)	
	Dental caries, dentine hypersensitivity & chronic periodontitis	0(0.0)	1(100.0)	

#-Fisher's exact

Table 5: Grading of clinical diagnosis using the Numeric Rating Scale (NRS)

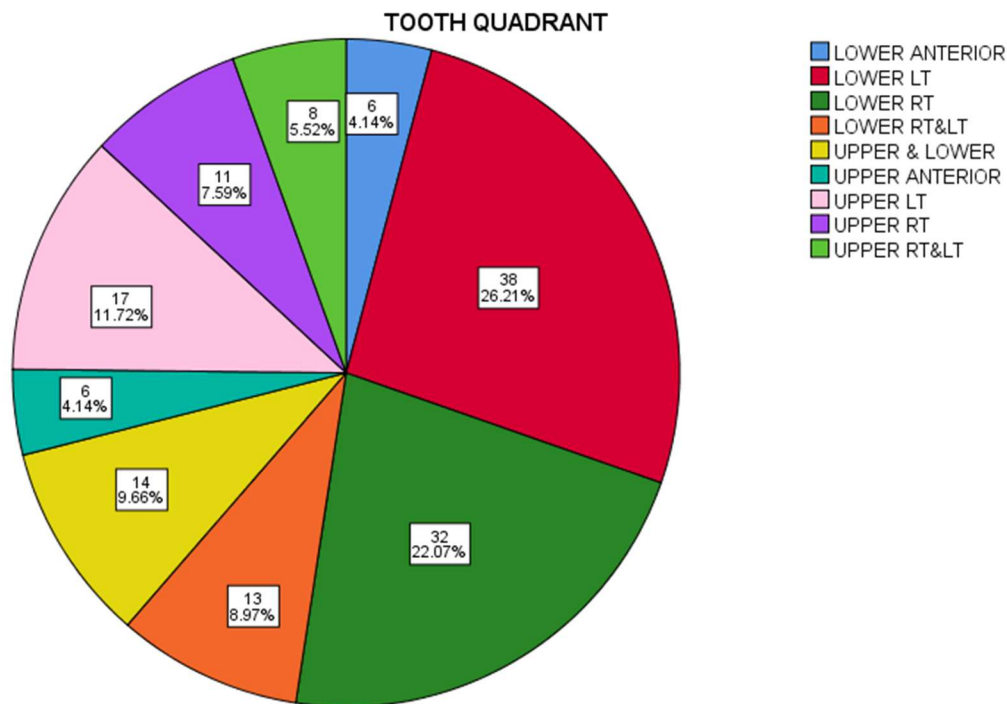
Variable		Numeric Rating Scale				P-value
No of Clinical Diagnosis	Clinical Diagnosis	1-3 (Mild) n(%)	4-6 (Moderate) n(%)	7-10 (Severe) n(%)	No response n(%)	
Single	Dental caries	9(37.5)	8(33.3)	7(29.2)	0(0.0)	0.225 [#]
	Chronic Periodontitis	6(10.9)	22(40.0)	26(47.3)	1(1.8)	
	Dentine Hypersensitivity	0(0.0)	1(100.0)	0(0.0)	0(0.0)	
	Pericoronitis	2(6.3)	8(25.0)	22(68.8)	0(0.0)	
Multiple	Chronic periodontitis & dental caries	1(16.7)	3(50.0)	2(33.3)	0(0.0)	
	Dental caries & dentine hypersensitivity	0(0.0)	0(0.0)	1(100.0)	0(0.0)	
	Chronic periodontitis & dental hypersensitivity	0(0.0)	2(33.3)	4(66.7)	0(0.0)	
	Chronic periodontitis & pericoronitis	0(0.0)	1(100.0)	0(0.0)	0(0.0)	
	Chronic periodontitis, dental caries & dentine hypersensitivity	0(0.0)	0(0.0)	1(100.0)	0(0.0)	

#- Fischer's exact

DISCUSSION

Assessment of the pattern and intensity of pain presented by a patient is a standard procedure in clinical practice. As pain is interpreted differently by individuals and the intensity of pain depends on the patient's perception,²³ patient's self-report has been accepted as the gold standard for assessment.²⁴ Pain measurement tools have been developed to assess

pain to monitor the effectiveness of and response to treatment.⁴ The tools should be simple and painless,⁶ in addition to being able to measure baseline discomfort and the response to treatment.²⁵ These tools include unidimensional scales,⁶ multidimensional scales⁸ and observational pain scoring system.¹⁰



RT- Right LT- Left

Figure 1: Distribution of dental pain across tooth quadrant.

Table 6: Correlation between Numeric Rating Scale and Verbal Rating Scale using Spearman's rho correlation

Verbal Rating Scale	Numeric Rating Scale										rho	p value
	1 n(%)	2 n(%)	3 n(%)	4 n(%)	5 n(%)	6 n(%)	7 n(%)	8 n(%)	9 n(%)	10 n(%)		
Mild	1(4.8)	4(19.0)	8(38.1)	5(23.8)	2(9.5)	1(4.8)	0(0.0)	0(0.0)	0(0.0)	0(0.0)		
Moderate	0(0.0)	1(1.6)	6(9.8)	15(24.6)	11(18.0)	12(19.7)	8(13.1)	6(9.8)	2(3.3)	0(0.0)	0.757	<0.001**
Severe	0(0.0)	0(0.0)	0(0.0)	0(0.0)	2(3.3)	7(11.5)	12(19.7)	17(27.9)	12(19.7)	11(18.0)		

*- significant # - Fischer's exact

In this study, the participants in the 20-29 and 30-39 age groups presented more with dental pain, this finding is similar to findings from previous studies,²⁶⁻²⁹ which reported highest dental pain among the 30-39 age group. This finding may be due to the fact the third molars tend to erupt around these age brackets and most individuals have pericoronitis. Also due to increased snacking and cariogenic dietary behaviour

among the young adults, there is an increased prevalence of dental caries among the young adults.³⁰ Majority of the participants who presented with pain were females, this finding is in tandem with previous studies,^{27, 28} but in contrast to the finding by the study by Azodo et al.²⁹ The difference could be due to the location of the study; the study by Azodo et al, was conducted in the northern part of Nigeria,

where females are restricted to seeking healthcare due to sociocultural and religious beliefs and practices.³¹ The females presented more with moderate to severe pain, this is not surprising as males are known to tolerate pain better, also, females tend to experience chronic pain syndromes and report more severe pain at more body parts than males.³²

Participants from the lower social class presented more with severe pain, similar to the findings from previous studies,^{29,33} and can be attributed to the fact that most people in the lower social class tend to delay before they seek dental treatment, also, there is a higher prevalence of oral diseases among the poor.³⁴ Furthermore, since dental treatments are mainly financed by out-of-pocket payments in Nigeria,³⁵ individuals from the lower socioeconomic group are affected negatively by their low household income and the high cost of dental treatment. As reported previously, those in the lower socioeconomic group rather endure dental pain,³⁶ and present late at the dental clinic when the pain becomes unbearable.

Dental service utilization in the previous year has been documented as a protective factor for toothache and reduces the prevalence of oral disease.³⁷ In this present study, participants who had previously visited the dental clinic within the last 6 months to over 12 months ago, presented more with moderate to severe pain, this finding is consistent with a previous study.²⁹ This finding may be because patients who attended the dental clinic previously, went for treatment rather than for check-up. This was reiterated by the study by Azodo et al.²⁹ who reported that about half of those who previously visited the dental clinic, came for treatment of toothache. Hence the importance of dental check-up should be emphasized among dental patients. As patients with orofacial pain present with diverse diagnoses, most of the participants in this study, presented with chronic periodontitis. This is in contrast to previous studies, where majority of the participants presented with caries and pulpal pain.^{26,28,38} The reason for the contrasting results may be attributed to the fact that chronic periodontitis, though increases with age and common among the elderly, cannot be completely absent among the younger age group, as poor oral hygiene increases the risk of chronic periodontitis.³⁹ Most of the participants who had chronic periodontitis and pericoronitis, presented with NRS pain score 7-10

(severe pain), while more participants with dental caries, were males with NRS pain score 1-3 (mild pain). This finding may be, because chronic periodontitis and pericoronitis occurred more among females, and women have greater nerve density which may cause them to feel pain more intensely than men. Also, females have been reported to experience more severe acute and chronic pain across a range of conditions.⁴⁰ In addition, it has been reported that males have higher pain tolerance than females.⁴¹

Most of the participants presented within the first week of pain, however, some participants still presented late, up to one month. It has been reported that most patients tend to self-medicate to relieve toothache, instead of presenting at the dental clinic early; claiming they do not have time to visit dental clinic, also many perceive that dental ailment are not serious health challenges.⁴² This finding is in tandem with a previous study,²⁹ where a large number of the participants had used one form of self-medication or the other before presenting at the dental clinic. Dental pain can arise from different quadrants of the mouth. The participants in this study, presented more with pain on the lower left and lower right quadrants, which is in tandem with a previous study by Omitola et al.²⁶ The reason could be that molar teeth in the mandibular segments are prone to chronic periodontitis, pericoronitis and dental caries.⁴³ This can be buttressed by a study by Braimoh et al.,⁴⁴ who studied the prevalence, causes and pattern of tooth loss among elderly people in Port Harcourt and reported that most tooth loss were from the mandibular posterior segment with periodontal disease as the most common cause of tooth loss.

There was a strong, positive and significant correlation between the numeric rating scale and the verbal rating scale in this study. This finding follows the trend of a previous study,⁴³ which compared verbal rating scale and numeric rating scale in the measurement of menstrual pain among female undergraduate students of the School of Medicine and Health Sciences of the University for Development Studies, Tamale, Ghana. It can therefore be inferred from this finding that the verbal rating scale, which is a descriptive scale can be used in place of the numeric rating scale. This study, however, is limited by the responses of the participants which could be exaggerated due the self-reported questionnaire used instead of an interview.

CONCLUSION

Numeric rating scale pain score 7-10, was associated with 20-29 years age group, female gender, lower socioeconomic class and previous dental visits ≥ 6 months. Chronic periodontitis was the commonest cause of pain and the lower left quadrant was the most commonly affected quadrant. Most patients presented within a week of onset of pain, though high level of self-medication was recorded. There was a strong, positive and significant correlation between the NRS and VRS.

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