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Late Presentation by Dental Patients at A Federal Tertiary Health Institution: Exploring the Reasons Behind the Menace.

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ABSTRACT

Background:
The late presentation of patients for treatment among dental patients is a common phenomenon in this clime. Despite the detrimental effects that dental diseases have on patients' quality of life, especially when prompt medical attention is not given, this attitude continues to persist.

Objectives:
To determine the reasons of late presentation and associated factors by dental patients presenting to the dental clinic of the Federal Medical Centre, Gusau.

Methods:
A cross-sectional study was conducted among dental patients presenting to the dental clinic of FMC Gusau from October 2024 through December 2024. Ethical approval was obtained from the research and ethics committee of the centre. Data was analysed using SPSS version 25. P-value ≤ 0.05 was considered statistically significant.

Results:
A total of 259 patients were enrolled in the study with a mean age of 31.6 (12.3. There is a slightly higher frequency of males, 135(52.1%) than females 124(47.9%), and the majority of the participants were civil servants. Close to half, 127(49.0), had a tertiary level of education, and the majority, 148(57.1), were married. The majority, 84 (32.4%) presented between 1 month and 3 months after the onset of symptoms. The main reasons for late presentation were self-medication, 89(34.4%), and fear, 66(25.5%). There was a statistically significant difference in the past dental visit and duration of symptoms in relation to age, occupation, level of education, and marital status (P-value < 0.05),

Conclusion:
Self-medication and fear were the major reasons for late presentation in this study.

Keywords:
Dental patients, late presentation, self-medication

Introduction

The burden of orodental diseases continues to rise, especially in developing and underdeveloped countries (1). This could be due to an imbalance in the healthcare facilities, which include both human and material resources in these regions of the world (1,2). The late presentation of patients for treatment among dental patients is a common occurrence in this environment (1,2). Despite the detrimental effects that dental diseases have on patients' quality of life, especially when prompt medical attention is not given, this attitude continues to persist in many societies, especially among developing countries (2,3). There are countless reports of overwhelming complications of seemingly insidious long long-standing dental diseases in the literature (3-6).

This is especially more prevalent among patients from the developing and underdeveloped world. Some of these complications include empyema thoracis, necrotizing fascitis, Ludwig's angina, sepsis, cavernous sinus thrombosis, meningitis, and even death (5).

There was an increased emphasis on the need to increase public engagement with the oral health system through the Healthy People 2030 mission for oral health (7). Despite the emphasis placed, challenges continue to rise with regard to access to safe, qualitative, and affordable oral health care (8,9). The delay in presentation of dental patients is multifactorial, involving both financial and nonfinancial factors (10,11). As prevention is the cheapest and most effective means of preserving health, coupled with the fact that modern day dentistry focuses more on ways of preserving and maintaining teeth in the oral cavity, this may not be achievable if patients do not present early to the dental clinic (12).

It therefore becomes necessary to scientifically document the challenges of late presentation, the reasons for those challenges in our environment, and suggest ways to address those challenges. This will pave the way for highlighting the problems and the solutions by courting the attention of the policy makers and the general public. This study aims to determine the reasons of late presentation and associated factors by dental patients presenting to the dental clinic of Federal Medical Centre, Gusau.

Materials and methods

Study design

A descriptive prospective cross-sectional study from October 2024 through December 2024.

Study area and population

This study was conducted among dental patients presenting to the dental clinic of the Federal Medical Centre, Gusau, Zamfara State

Ethical consideration

Ethical approval was obtained from the research and ethics committee of the Federal Medical Centre Gusau, Zamfara State, with reference number FMC/2021/985/008/NHREC/TR/19/03/2016.

Sampling method and sample size determination

A simple random sampling method was used and the minimum sample size was calculated using the following formula n= z2pq/d2, where z=1.96, p=21.5% (0.215) and q=1-p (78.5%) = 0.785 from a similar study by Ibikunle et al. (7) and a precision of 5% as was used. Therefore, n=259 (The minimum sample size).

Study procedure

Informed consent was obtained from prospective respondents before the administration of the questionnaires, which consisted of three different sections. Section A captured the socio-demographic data (age, gender, educational level, occupation, and marital status). Section B captured the clinical data (duration of symptoms and clinical diagnosis), while Section C captured the previous dental visit, dental treatment received before, the type of treatment received, past dental experience, and reason for late presentation. The questionnaire was subjected to Face validation by sending it to experts in the same field for scrutiny; after which, all their observations and corrections were implemented, and subsequently, a pilot study was conducted to ensure its reliability.

Statistical analysis

The collected data was analysed using IBM-SPSS Statistics for Windows, version 25 (IBM SPSS version 25). Variables were summarized as mean (± Standard deviation). A Pearson's Chi-square was used to determine statistical significance, and a p-value ≤ 0.05 was considered statistically significant. Results presentation was done using proportions, frequencies, percentages, mean, and standard deviations.

Results

A total of 259 patients were enrolled in the study with a mean age of 31.6 (12.3. There is a slightly higher frequency of males, 135(52.1%), than females 124(47.9%). The majority of the participants were civil servants and students, with a frequency of 82(31.7%) each, followed by Housewives 48(18.5%), Business 23(8.9%). Figure 1

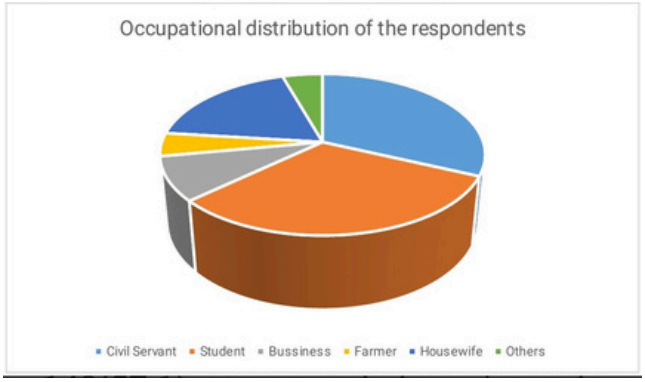


Figure 1: Occupational distribution of the respondents

Close to half, 127(49.0), had a tertiary level of education, and the majority, 148(57.1), were married as shown in table 1.

Table 1: Socio-demographic characteristics of the respondents

Socio-demographic variable	Frequency (%)
Gender	
Male	135 (52.1)
Female	124 (47.9)
Occupation	
Civil servant	82 (31.7)
Student	82 (31.7)
Business	23 (8.9)
Farmer	12 (4.6)
Housewife	48 (18.5)
Others	12 (4.6)
Level of education	
None	32 (12.4)
Primary	15 (5.8)
Secondary	85 (32.8)
Tertiary	127 (49.0)
Marital status	
Single	111 (42.9)
Married	148 (57.1)

Only 18(6.9%) of the participants presented less than 1 month after the onset of symptoms, but most of them 84 (32.4%) presented between 1 month – 3 months, followed by > 3 months – 5 months 56 (21.6), > 5 months – 7 months 48 (18.5), and > 7 months – 9 months 47 (18.1) as shown in table 2.

Table 2: Clinical findings

Clinical variable	Frequency (%)
Duration of symptoms	
< 1 month	18 (6.9)
1 month – 3 months	84 (32.4)
> 3 months – 5 months	56 (21.6)
> 5 months – 7 months	48 (18.5)
> 7 months – 9 months	47 (18.1)
> 9 months	6 (2.3)
Diagnosis	
Dental caries	48 (18.5)
Irreversible pulpitis	68 (26.3)
Acute apical periodontitis	43 (16.6)
Dentoalveolar abscess	27 (10.4)
Cervico-facial space infection	17 (6.6)
Pericoronitis	24 (9.3)
Non-carious tooth wear lesions	3 (1.2)
Facial fracture	9 (3.5)
Tumor	3 (1.2)
Dental fracture	5 (1.9)
Periodontitis	6 (2.3)
Cyst	6 (2.3)

Close to one-third, 68(26.3%) of the study participants presented with Irreversible pulpitis, followed by Dental caries 48(18.5%), Acute apical periodontitis 43(16.6%), Dentoalveolar abscess 27(10.4%), and Pericoronitis 24(9.3%) in descending order.

Slightly above half of the participants, 140(54.1), have visited a dentist before, and 138(53.3) have received dental treatment before. Scaling and polishing was the most frequently accessed dental treatment, 105(40.5%), followed by tooth extraction, 67(25.9%), dental filling, 52 (20.1%), and tooth replacement, 38(14.7%) as shown in table 3.

Table 3: Past dental history and reasons for late presentation

Variable	Frequency (%)
Previous dental visit	
Yes	140 (54.1)
No	119 (45.9)
Have you received dental treatment before?	
Yes	138 (53.3)
No	121 (46.7)
Type of treatment received	
Scaling and polishing	105 (40.5)
Dental filling	52 (20.1)
Tooth extraction	67 (25.9)
Tooth replacement	38 (14.7)
Correction of malposition teeth	0 (0.0)
Past dental experience	
Pleasant	58 (22.4)
Uncomfortable	44 (17.0)
Dentist was impersonal	3 (1.2)
Scary experience	29 (11.2)
Painful	3 (1.2)
Expensive	9 (3.5)
Did not like the environment	3 (1.2)
Reasons for late presentation	
Fear	66 (25.5)
Tried other medications I thought will solve the problem	89 (34.4)
Problem will resolve on its own	28 (10.8)
Financial constraint	23 (8.9)
Time constraint	41 (15.8)
Not aware of possible solution to the problem	3 (1.2)
Distance to the clinic is far	6 (2.3)

The majority, 58(22.4%), believed that their past dental experience was pleasant, 44(17.0%) had an uncomfortable experience, and 29(11.2%) had a scary experience as shown in table 3.

The reasons for late presentation put forward by the patients were as follows: self-medication 89(34.4%), Fear 66(25.5%), time constraint 41(15.8%), expectation of spontaneous resolution 28(10.8%), financial constraint 23(8.9%), distance to the clinic is far 6(2.3%) and not aware of the possible solution to the problem 3(1.2%) as seen in table 3 and figure 2.

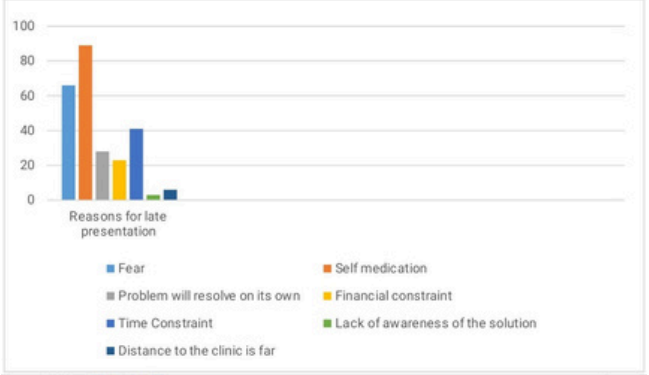


Figure 2: Reasons for late presentation

Bivariate analysis was done to determine the influence of socio-demographic variables on the previous dental visit as well as on the duration of symptoms. There was a statistically significant difference on the past dental visit in relation to age, occupation, level of education, and marital status (P-value < 0.001), and there was also a statistically significant difference on the duration of symptoms in relation to age, occupation, level of education, and marital status with a P-value of <0.001, 0.001, 0.001, and 0.005 respectively as shown in table 4 and 5.

Table 4: Bivariate analysis using chi-square between the socio-demographic variables and dental visits.

Variables	Dental visit Yes (n)	No (n)	p-value
Gender			
Male	72	68	0.453 (df = 1)
Female	63	56	
Age category			
< 21 years	23	41	
21-30 years	30	39	
31-40 years	47	27	<0.001 (df = 6)
41-50 years	26	6	
51-60 years	11	0	
61-70 years	0	3	
> 70 years	3	3	
Occupation			
Civil servant	73	9	
Business	5	18	
Student	35	47	
Farmer	6	6	<0.001(df = 5)
Housewife	15	33	
Others	6	6	
Level of education			
None	11	21	
Primary school	6	9	<0.001 (df = 3)
Secondary school	29	56	
Tertiary	94	33	
Marital status			
Single	46	65	<0.001 (df = 1)
Married	94	54	

Table 5: Bivariate analysis using chi-square between the socio-demographic variables and duration of symptoms.

Variable	Socio-demographic factor	p-value
Duration of symptoms	Gender	0.110 (df = 5)
	Age category	*0.000 (df =30)
	Occupation	*0.001 (df = 25)
	Level of education	*0.001 (df = 15)
	Marital status	*0.005 (df = 5)

*Means statistically significant

Discussion:

Oral health is generally accepted as a very vital public health entity since it has for a very long time been established to affect the overall general health (13). Globally, dental diseases, especially untreated dental caries and its sequelae, are among the most prevalent health concerns. This often leads to catastrophic personal and societal financial burdens, reduced quality of life, and life expectancy (13,14).

Various reasons for the late presentation of patients seeking dental services have been put forward by several researchers.10,15 Prominent amongst them is the patients' perception of dental treatment needs and the availability of facilities that can cater to those needs. Multiple factors still come into play in situations where both expertise and physical resources are available (10,11,16).

There was a higher proportion of male compared to female in this study which is in keeping with other studies by Ibikunle et al. (6) and Kaura et al. (15,17) but different from Anyanechi et al. (12) Kikwilu et al. (18), Sachedina et al. (19), and Omokhua et al. (20). This could be explained in several ways: first, men are mostly preoccupied by work in order to have source of livelihood for the whole family, making them to develop negative attitude towards health seeking behaviour at the expense of their health; secondly, men tend to have a higher pain threshold compared to women, and as a result, they can withstand more pain leading to delay in presentation at the hospitals.

The participants were predominantly civil servants, students, and housewives, making them belong to either the intermediate or low socioeconomic status category (21). Although the National Health Insurance Authority exists under the Federal Ministry of Health in Nigeria, which is saddled with the responsibility of ensuring all civil servants are covered under the health insurance, it is not devoid of shortcomings. The insurance only covers the federal workers, excluding the subnational (State and Local government) employees, and it does not offer complete coverage, leaving out some services for patients to cater for themselves. Furthermore, in most states, the health insurance agencies are either non-existent or non-functional, and therefore, the majority of state and local government employees are not covered under any form of health insurance. This corroborates findings by Ogundeji et al. (22), and Wagstaff et al. (23), who reported that less than 5% of the Nigerian population have health insurance coverage and that "out of pocket expenditure represents about 75% of total health spending in the country". It is therefore not surprising for civil servants and students to indulge in the habit of late presentation to dental clinics.

It is quite astonishing to note that half of the participants in this study had a tertiary level of education despite the fact that several studies (21,24,25) have attributed positive health-seeking behaviour to an increase in level of education. In this case, the higher level of education amongst the study participants did not prevent them from presenting late to seek oral health services, and therefore, other factors which are known to be responsible for late presentation may have played a role.

Only 18(6.9%) of the participants presented to the clinic less than one month after the first symptom, while 84(32.4%) presented between one to three months. However, in the majority of the participants, 157(60.5%), the duration of symptoms was greater than three months. This is more or less similar to the findings by Ibikunle et al. (6), Kusekwa et al. (10), and Oginni et al. (26). The resultant effect of this poor health-seeking behaviour is receiving patients with chronic and complicated cases with poor prognosis.

Similar to other studies (6,12), dental caries sequelae (irreversible pulpitis, acute apical periodontitis, dentoalveolar abscess, and cervicofacial space infection) constituted 155(59.9%) of the participants' diagnosis, while the dental caries which is the initiator of all the sequelae is present in 48(18.5%) of the participants. This has further unveiled the menace of late presentation in our society and at the same time buttressed the fact that the habit is still prevalent despite efforts being made to increase awareness on health.

The previous dental visit amongst the participants was remarkable (54.1%), and 53.3% of the participants had received dental treatment before, which was largely scaling and polishing (40.5%), followed by tooth extraction (25.9%). This has shown that, although most of the participants presented late, many of them have a positive attitude in seeking preventive oral healthcare services. The former may be attributable to the seemingly non-invasive nature of scaling and polishing, coupled with the fact that the participants were predominantly youth below the fourth decade of life.

Although majority of the patients presented late in this study, most of them claimed that their past dental experience was pleasant which is similar to the finding by Anyanechi at al. (12) who in their study titled "Reasons underlying failure to seek early dental treatment among patients presenting in a Nigeria tertiary hospital" reported that 48.8% of their study participants claimed that their experience on previous visit to dentist was pleasant.

Self-medication was the main reason for delayed presentation cited by most patients in this study, which is similar to what Ibikunle et al. (6) and Omokhua et al. (20) reported, but at variance with reports by other authors (12,17,19). Anyanechi et al. (12) reported that most patients presented late because they believed symptoms would resolve spontaneously, Olawole et al. (17) cited "busy work schedule" as the main reason for late presentation, while Sachedina et al. (19) reported "self-negligence" as the main reason for late presentation. This finding may not be unconnected with the rampant practice of self-medication among the citizens in our society (26,27).

The phenomenon occurs in a bifid form involving both orthodox and non-orthodox medications, and in the case of an orthodox self-medication, the drugs are utilized without any form of evaluation or prescription by a trained and licensed healthcare worker. This is a complex factor that may be provoked and exaggerated by multiple other reasons such as financial constraint, fear, time constraint, and relative or absolute non-availability of oral healthcare services, especially at the primary and secondary levels.

Conclusion

Self-medication and fear were the major reasons for late presentation in this study. Therefore, there is an urgent need to create more awareness on the dangers of self-medication, and to enforce the already existing policies and regulations regarding the sale of medications by pharmacies and patent medicine stores without a doctors' prescription.

Limitations

This research was a single centre study involving patients visiting the dental clinic Federal Medical Centre Gusau, which is the only federal tertiary health institution in the state. The findings may not be generalizable.

We recommend the full implementation of the national oral health policy with emphasis on integrating oral healthcare services at both primary healthcare facilities and general hospitals, increased public awareness on the dangers of late presentation and self-medication, and qualitative multi-centre study to have a more representative sample, and to explore in depth some of the hidden factors responsible for late presentation to the dental clinics.

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Conflict of interest:

There are no conflicts of interest in this study.

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