Fear and anxiety in patients undergoing minor oral surgery

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Abstract

Objective: This study was carried out to determine the causes of fear and anxiety in consecutive patients who attended the University of Benin Teaching Hospital for minor oral surgical treatment.
Method: All consenting consecutive patients referred for minor oral surgery were studied. Information on all the patients was entered into a pre-designed data form. The treatment procedures were carefully explained to the patients in English, 'Pidgin' English, and the local languages of the patients. The patients were interviewed before and after treatment with regard to fear and anxiety relating to the treatment procedure.
Results: One hundred and fifty patients aged 18-85 years, (mean age 33.4 years) were studied. Fifty-eight percent and Forty-two percent of the patients reported being anxious and fearful respectively, about the treatment they were about to receive. More patients (40.3%) feared the dental nurse than the needle. More females (36.4%) were anxious about treatment than males (20.1%). The patients in the age range of 21-30 years (32.6%) expressed fear and anxiety more than the other age groups. About half of the patients that attended for exodontia expressed more anxiety about treatment. Less than one half of the patients (44.2%) thought their fears were justified after treatment. Verbal communication allayed fear and anxiety in 70.8% of the patients studied.
Conclusions: Fear and anxiety about what will happen to the patient's teeth are barriers identified in this study for undertaking of minor oral surgical procedures at the centre. This study reinforces the need for verbal communication as an effective means of allaying the patient's fear and anxiety before treatment.

Keywords: Fear, anxiety, minor oral surgery

Introduction

Fear and anxiety associated with dental surgery have long been recognized[1, 2]. In spite of improved technology in the treatment of patients in modern dentistry, fear of pain and anxiety about dental treatment are still widespread [1]. Fear has been defined as an emotional response to a perceived immediate threat while anxiety is defined as a stress response to an ill-defined or anticipated situation [3,4]. The desire to be free from the pain of toothache is a strong motivation for the dental patient to seek treatment. Expectation of pain from tooth extraction, anaesthetic "shot" and the "drill" has significant contribution to anxiety, which can lower pain tolerance[5,6].
These emotional responses to treatment have been known to contribute to many cases of failed mandibular block and adverse reactions in the dental chair [7]. Available information on fear and anxiety of dental treatment are generalised findings, which have been applied to all specialties in dentistry. A patient may fear the "drill" and loathe the sound of the amalgamator in the restorative clinic while accommodating the environment of the oral surgery clinic.The patients who report for exodontia in oral surgery clinics are often treated for pain by extracting an offending tooth. Care about the specific concerns of the patient like "fear of injections", surgical procedure, staff and the environment are sometimes pushed to the background. This study intends to elicit these specific concerns in the patients who report for exodontia and other minor oral surgical procedures in the University of Benin Teaching Hospital.

Materials and Method

The Oral and Maxillofacial Surgery Clinic where routine treatment of patients is carried out is a University of Benin Teaching Hospital clinic that is located within the campus of the University of Benin, Nigeria. The hospital shares a common boundary with the university, consequently, it has a large attendance from the university community. This study was designed for consenting consecutive patients who report in the clinic for minor oral surgical procedures and all such patients were studied. A data form was designed in part to collect information on demographic parameters, reasons for attendance and duration of symptoms.
The second part of the data form was a questionnaire, which was pretested on 20 patients. This was necessary in order to provide guidance or modification of the questionnaire. However, this was found to be unnecessary and the responses were therefore included in the main study. The senior registrar in Oral and Maxillofacial Surgery administered the questionnaire on the patients by carefully interviewing them before and after treatment and the

results were compared. Some of the questions were close ended while majority of them were open ended. The treatment procedures were thoroughly and carefully explained to the patients in English, 'Pidgin' English and the local languages of the patients just before treatment. This was necessary to maximise understanding and to reduce ambiguities. The patients who were not willing to participate in the study were excluded.

Data analysis

Data analysis was carried out using the Statistical Package for Social Sciences (SPSS) software version 10. Simple frequencies were determined for all variables. Where multiple responses were required for a question, each response was treated as a separate variable. For further analysis, patients' responses, age, gender, anxiety and fear were cross tabulated against all other variables to determine any pattern or associations. Only valid responses were used. The Pearson Chi-square (^{2}) test was used and the critical level was set at 5%. Probability (P-value) value of less than 0.05 was regarded as significant.

Table 1. Age distribution of patients

Age (Years)	n	%
18-20	27	(16.0)
21-30	63	(42.1)
31-40	12	(8.0)
41-50	26	(17.3)
51-60	10	(6.7)
61-70	6	(4.2)
71-80	4	(2.8)
>80	2	(1.4)

Result

One hundred and fifty four consecutive patients aged 18-85 years with a mean age of 33.4 years were studied. They comprised 55 (36.7%) males and 95 (63.3 %) females. Eighty-six (57.3%) patients were single, 61 (40.7%) married and 3 (2.0 %) widowed (Table 1). Students constituted 87 (58.0%) of the patients while the others were traders 21 (14.0%), civil servants 19 (12.9%), housewives 8 (5.3%), farmers 6 (4.0%), apprentice 3 (2.0%), retired 2 (1.3%) and 4 (2.7%) not specified. Fifty-eight percent of the patients studied reported they were anxious about the treatment they were about to receive while only 43% reported fear (Table 2).

Seventy-nine (51.3%) had their teeth extracted previously with only 14.9% having had problems with the extractions.

Figure 1. What patients feared most

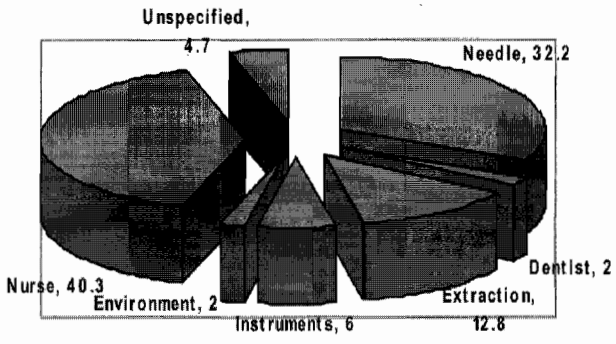


Figure 2. Patients with and without fear or anxiety according to age group.

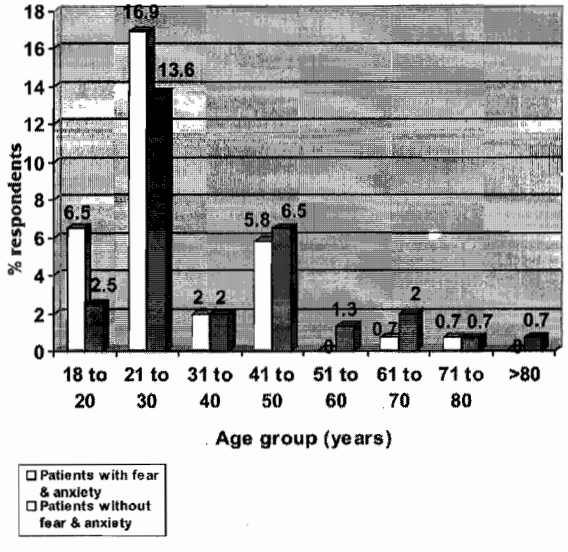


Table 2. Responses of patients to some of the questions

Questions	Yes n %	No n %	N/A	Mean	Median	SD
Are you anxious about the treatment you are about to receive?	87(58.0)	63 (42.0)	-	1.4	1.0	0.50
Do you fear the treatment you are about to receive?	64(43.0)	85 (57.0)	-	1.6	2.0	0.50
Have you had your tooth removed before?	79 (51.3)	73(47.4)	2 (1.3)	1.5	1.0	0.5
Did you have any problem?	23 (14.9)	86 (55.8)	45(29.2)	1.3	2.0	0.9
Are you receiving any medication for any illness?	25 (16.8)	101(67.8)	23(15.4)	1.5	2.0	0.8
Was treatment procedure explained to you?	129(83.8)	11(7.1)	45(29.2)	1.0	1.0	0.4
Did explaining treatment procedure help allay your fear?	109(70.8)	16(10.4)	29(18.8)	0.9	1.0	0.5
Do you think your fear was justified?	72(46.8)	44(28.6)	38(24.7)	1.0	1.0	0.7

One hundred and nine (70.8%) admitted that explaining the treatment procedure helped allay their fears. Figure 1 shows what the patiences feared most. Sixty-two (40.3%) feared the nurse, while Fifty (32.2%) feared the needle. Some of the reasons given by the patients for fearing treatment were 'I don't know what will happen to my teeth' 102 (68.5%), 'I don't know what will happen to me' 13 (8.7%), unspecified 34 (22.8%). The patients who expressed fear and anxiety about treatment constituted 50 (32.6%) of the sample and 26 (16.9%) of these were in the age range of 21 to 30 years (Figure 2). One hundred and thirty-one (87.9%) patients were referred for exodontia, while 4(2.7%), 2 (1.3%) and 12 (8%) were for biopsy, suture removal and unspecified respectively.

When the reasons for fear were compared with the treatments the patients were receiving, there were 88 (57.1%) patients for exodontia, 2 (1.3%) for biopsy, 2 (1.3%) for suture removal and 2 (1.3%) unspecified, who 'don't know what will happen to my teeth'.

Those who expressed fear because they 'don't know what will happen to me' were 11 (7.1%) patients for exodontia, 1(0.7%) biopsy, and 1 (0.7%) unspecified.

(X^2=7.182, P<0.05).

When anxiety about treatment was compared to the treatment the patient was receiving, the patients that were to receive the following treatments- exodontia 76 (49.4%), biopsy 2 (1.3%), suture removal 1 (0.7%), unspecified 2 (1.3%), were anxious about treatment compared to patients for exodontia 55 (35.7%), biopsy 2 (1.3%), suture removal 1 (0.7%), and unspecified 1 (0.7%), were not anxious about treatment (X^2= 0.267, P< 0.05).

Fear and anxiety about treatment were also compared with the gender of the patients. There were 11 (7.1%) males and 39 (25.3%) females who expressed fear and anxiety about treatment while 20 (13.0%) males and 16 (10.4%) females did not fear treatment but were anxious about it. There were 4 (2.6%) males and 10 (6.5%) females who were not anxious about treatment but feared it. However, 20 (13.0%) males and 29(18.8%) females neither feared treatment nor were they anxious about it (X^2=2.415, P< 0.05).Generally, 31 (20.1%) males and 56 (36.4%) females were anxious about treatment while 24 (15.6%) males and 39 (25.3%) females were not anxious about treatment (X^2=0.095,P<0.05).

After treatment, the patients were asked how they felt and whether they thought their fears were justified before treatment. Sixty-two (46.6%) felt satisfied while 33 (21.4%) reported they had pain (Figure 3), figure 4 shows the relationship between age groups and justified for fear? (X^2=105.402), P< 0.05). Sixty-eight patients (44.2%) thought their fears were justified while 44 (28.6%) thought they were not. The patients who thought their fears were justified gave the reasons of pain 11 (7.4%) and 'it is normal to fear' 57 (38.3%) as the primary reasons they feared treatment, Twenty-one (13.6%) males and 47 (30.5%) females reported their fears were justified while 16 (10.4%) males and 28 (18.2%) females reported that their fears were not justified (X^2=2.856, P<0.05).

Figure 3. How patients felt after treatment

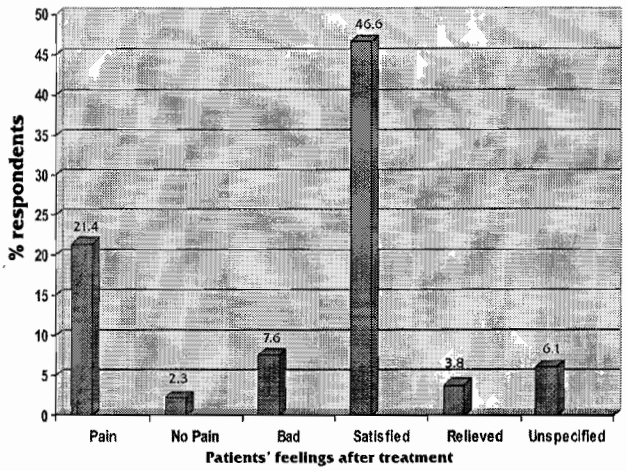
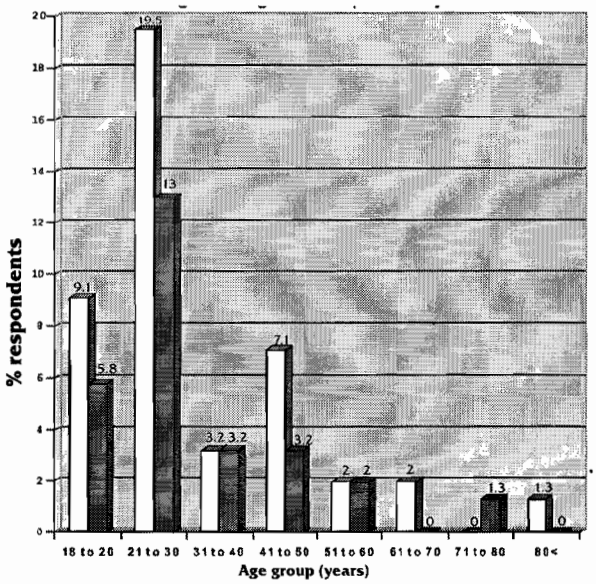


Figure 4. Age and response to justification of fear



Discussion

The patients that the oral surgeons treat every day in their surgeries have unexpressed fear and anxiety about treatment. Different patients express different degrees of fear. What the present study has attempted to do was to elicit the subjective emotional feelings of the patients that came for minor oral surgery treatment in our clinic. This was necessary to enable surgery staff improve rapport with patients, allay their fears and encourage them to attend regularly for treatment. The results indicate that more than half of the patients who sought treatment were anxious while less than one half of them feared treatment and more females than males expressed fear and anxiety about treatment. There was a significant relationship between the gender of the patient and the expression of fear and anxiety of treatment (P< 0.05). More than half of the patients were not new attenders to the dental surgery clinic- an observation, which is in contrast with Frazer and Hampson's[8] report that new attenders were more anxious,

fearful and neurotic than regular attenders. Perhaps these differences could be due to the use of measuring instruments employed by them to quantify fear and anxiety in a different clinical setting. However, a recent survey shows that many practitioners do not use these instruments routinely in assessing dental anxiety in practice providing I.V sedation, G.A or hypnosis seem more unlikely to be administered [9].

It is interesting to observe in this study that what patients feared most in our oral surgery clinic was the dental nurse and 40% of patients expressed fear of these surgery staff while fear of the needle ranked second even though a significant proportion of patients came for exodontia. This observation may be due to the fact that they are the first surgery staff patients come into contact with before treatment. The fear patients expressed about treatment was because ' I don't know what will happen to my teeth.' Although 68.5% of the patients indicated this to be the main reason for fear, it had a significant relationship with the treatment the patient was to receive ($P<0.05$). This 'anticipatory fear' is also known to influence attendance rate in surgeries. [10] Different methods and techniques have been used to manage fearful and anxious patients in oral surgery clinics and these include the use of relative analgesia, intravenous sedation and general anaesthesia. These methods were not used to treat any of the patients. Most of the patients who expressed fear and anxiety about treatment were in the age group of 21-30 years. Incidentally, more of the patients in this age group were also less likely to express fear and anxiety about treatment. This observation may be attributed to the fact that an appreciable number of them were treated. There was a significant relationship between the age of the patient and the justification for fear of treatment ($P<0.05$).

Procedures were carefully and thoroughly explained to all the patients both in English, 'Pidgin' English and the local languages of the patients just before treatment. Some authors have emphasized the use of appropriate chair side manners, which include the use of basic behavioural modification, positive suggestions and reassurance in reducing fear and anxiety[10]. Others have recognized the value of 'written information leaflets' [11, 12]. These procedures are rarely used in our clinic. However, this study shows that verbal communication with the patients was responsible in reducing fear in majority of the patients before treatment, which is in contrast with some studies, which have demonstrated its inadequacy prior to exodontia or surgical removal of a third molar [13,14]. About half of the patients that came for exodontia expressed more anxiety about treatment than the other categories of patients and there was a significant relationship between the treatment the patient was to receive and the degree of fear of treatment ($P<0.05$).

However, less than half of the patients thought their fear was justified after receiving treatment and some thought 'It is normal to fear.' The majority of these patients were females. It does appear that fear and anxiety about minor oral surgical procedures cannot completely go away even with the use of suggestions by some authors and the employment of 'written information leaflets' by others [10,12]. Perhaps, apart from previous experience of pain, custom, upbringing, exposure to different situations and training may influence the degree of expectation of fear of treatment, which may necessitate further investigation.

In conclusion, fear and anxiety about "what will happen to the patient's teeth" are identified in this study as causes of fear and anxiety when undertaking minor oral surgery in our environment. The patients more commonly expressed fear of the dental nurse than fear of the procedure or the needle. Tooth extraction appeared to generate more anxiety in the patients than the other minor oral surgery procedures While we recognize the value of other means of communications with patients before treatment, verbal communication of enough information about treatment procedures and possible complications are also of useful in allaying patients' fears and anxiety before treatment and are recommended to be routinely employed during minor oral surgery treatment procedures.

References

1. Gatchel RJ, Ingersoll BD, Bowman L, Robertson MC, Walker C. The prevalence of dental fear and avoidance: a recent survey. J Am Dent Assoc 1983; 197: 809-810.
2. Lindsay SJE, Jackson CP. Fear of routine dental treatment: its nature and management. Psychol Health 1983; 8: 135-153.
3. Robin IG, Slovin M, Krochak M. The psychodynamics of dental anxiety and dental phobia. Dent Clinic North Am 1988; 32: 647-656.
4. Mersky H. Pain terms: a list with definitions and notes on usage. Pain 1979; 6: 249-252.
5. Wardle J. Fear of dentistry. Br Med Psychol 1982; 55: 119-226.
6. Scotts DS, Hirschman R. Psychological aspects of dental anxiety in adults. J Am Dent Assoc 1982; 104: 27-31. 7. Wong MKS, Jacobson PL. Reasons for local anaesthetic failures. J Am Dent Assoc 1992; 123: 69-73.
8. Frazer M, Hampson S. Some personality factors related to dental anxiety and fear of pain. Br Dent J 1988; 165: 436-439.
9. Dailey YM, Humphris GM, Lennon MA. The use of dental anxiety questionnaires: a survey of a group of UK dental practitioners. Br Dent J 2001; 190: 450-453.
10. Haas DA. Management of fear and anxiety in: Pharmacology and therapeutics for Dentistry. Yagiela JA, Neidle EA, Dowd FJ (eds), 4TH Ed Mosby St Louis, Philadelphia, London 1998, 623-633.
11. Jackson C, Lindsay S. Reducing anxieties in new dental patients by means of leaflets. Br Den J 1995; 179: 163-167.
12. O'Neill P, Humphris GM, Field EA. The use of information leaflets for patients undergoing wisdom tooth removal. Br J Oral Maxillofac Surg 1996; 34: 331-334.
13. Anderson KO, Mansur FT. Psychological preparation for invasive medical and dental procedures. J Behav Med 1983; 6: 1-40.
14. Layton SA. Informed consent in oral and maxillofacial surgery: a study of its efficacy. Br J Oral Maxillofac Surg 1992; 30: 319-322.