

ENDODONTIC PATIENTS' PROFILE AND EXPERIENCE IN A DENTAL SCHOOL SETTING

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ABSTRACT

The aim of this study was to assess patient's previous experience of endodontic treatment and satisfaction with the present endodontic treatment received in a dental school setting.

A questionnaire on previous and present endodontic experience was administered to 83 consecutive patients receiving endodontic treatment between January 2010 and June 2010 in the Department of Restorative Dentistry of Lagos University Teaching Hospital (LUTH).

82% of the patients seen preferred root canal treatment (RCT) to extraction. 88% were satisfied and rated their treatment and the clinic average to very good. 61.5% reported that they would definitely recommend endodontic treatment to others. 9 (10.8%) patients reported that they would never recommend endodontic treatment. 8 out of the 9 patients experienced pain during the endodontic treatment. Patients' expectation of their tooth being preserved by root canal treatment was met by the LUTH dental centre. Patients' dissatisfaction with endodontic treatment is associated with a painful experience.

INTRODUCTION

Increase in the awareness of dental care has resulted in patients demanding for treatment that will preserve their teeth rather than extraction but the fear of pain keeps the patient from seeking dental care early¹. When patients eventually present at the dental clinic because they can no longer endure the pain, some still want

their tooth preserved rather than extracted. The profile of patients receiving endodontic treatment needs to be assessed so as to provide a basis on which qualitative and quantitative improvement can be made in the delivery of endodontic care to the patients².

A survey conducted by the American Association of Endodontists showed that general public's perception of endodontic treatment is negative due to its association with pain before and after treatment. Patients who had experienced endodontic treatment were found to be less anxious than patients with no previous experience³.

Following the introduction of clinical governance in 1995, there has been an increasing emphasis on the patient's

KEY WORDS: Root canal treatment, endodontic experience, dental school

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experience of health care⁴. Patient's satisfaction may be defined as patient's attitude towards health care provided or received⁵. Important element of clinical governance is to establish the patient's experience of treatment received and use this information to promote a high level of patient satisfaction⁶. Assessment of patient's experience and satisfaction with root canal treatment will help the Department of Restorative Dentistry to assess the quality of endodontic care provided and plan how to improve the quality of service in terms of manpower training and provision of appropriate materials and equipment needed for endodontic care. This will encourage patients to choose endodontic treatment over tooth extraction thereby preserving their teeth. Little data is available regarding patients' attitude and experience with endodontic treatment in Nigeria.

The purpose of this study was to determine the profile and endodontic experience of patients receiving endodontic treatment and assess their level of satisfaction with the endodontic treatment received at the Department of Restorative Dentistry clinic of Lagos University Teaching Hospital, Nigeria.

MATERIALS AND METHODS

A questionnaire consisting of 5 groups of questions modified from the questionnaire used in the Gorduysus study⁷ (figure 1) was administered to 83 consecutive patients receiving endodontic treatment in the Department of Restorative Dentistry clinic of the Lagos University Teaching Hospital. The questionnaire was administered to the patients at their first visit and final visit. It takes two to three visits to complete each root canal treatment. 83 endodontic patients mean 166 to 249 endodontic visits. Data was collected over a period of six

months between January and June 2010. The questionnaire contained questions about patient's previous and present experience with root canal treatment. General information on age, sex, occupation and level of education was also requested in the questionnaire. The effect of previous and present endodontic experience on patients' attitude to root canal treatment was assessed.

The data analysis was performed with statistical package for Social Sciences software version 11 (SPSS, Chicago, III) and statistical significance between frequencies was evaluated with chi-square test at a significance level of $p < 0.05$

RESULTS

The study population comprised of 29 males and 54 females whose age ranged from 18 to 69 years (figure 2) with a mean of 32.2 ± 8.8 years. The patients' level of education is presented in table 1. 35% of the respondents were students and the remaining 65% were spread across other professions. 65% of the patients are self supporting i.e. paid for their treatment by themselves, 3.6% had their treatment paid for by health insurance, 19.3% reported other sources of funding for their treatment and 12% did not disclose their source. Out of 83 patients seen, 30 (36%) patients had previous endodontic treatment experience. The age and sex distribution of those with previous endodontic experience is presented in table 2. Majority (63.3%) of the patients who have had previous endodontic experience were from the age group 21-35 years.

Previous endodontic treatment experience

14 molars, 11 premolars and 5 anterior teeth were endodontically treated in patients with previous endodontic experience. 23.3% of the patients reported

Figure 1: Endodontic patient profile questionnaire

Group 1 questions

1. Age

2. Occupation

3. Gender Female Male

4. Education primary secondary post secondary (polytechnic, University)

5. Have you previously received root canal treatment yes no

If your answer is yes, please answer the group 2 questions. If no, please answer the group 3 questions

Group 2 questions

6. On which tooth was the root canal treatment done

Incisor canine premolar molar

7. Did you experience any pain during the root canal treatment

Yes, much Yes, a little No

8. Who completed your root canal treatment

Consultant Resident doctor Dental Student private general dental practitioner

9. Do you still use this tooth

Yes, with comfort yes with discomfort no, it was later extracted

10. If the answer to question 9 is yes, how long after root canal treatment have you been using the tooth

1-3 years 4-5 years 6-10 years more than 10 years

Group 3 questions

11. Are you anxious about the root canal treatment you are about to receive

No yes, a little yes, very much

12. Do you think root canal treatment will be painful yes no

13. Do you believe your tooth will be preserved and maintained with root canal treatment

Yes no

Please answer Group 4 questions after you have completed your root canal treatment

14. Was the root canal treatment as painful as you thought yes no

15. If this treatment is necessary for another tooth would you prefer?

Extraction root canal treatment

16. Would you recommend root canal treatment to somebody else?

Never yes maybe

17. Please grade your satisfaction with the root canal treatment and clinic

Poor average good very good

Group5 questions

18. Who pays for your root canal treatment

Myself health insurance employer other sources

Figure 2: Age and gender distribution of the study population

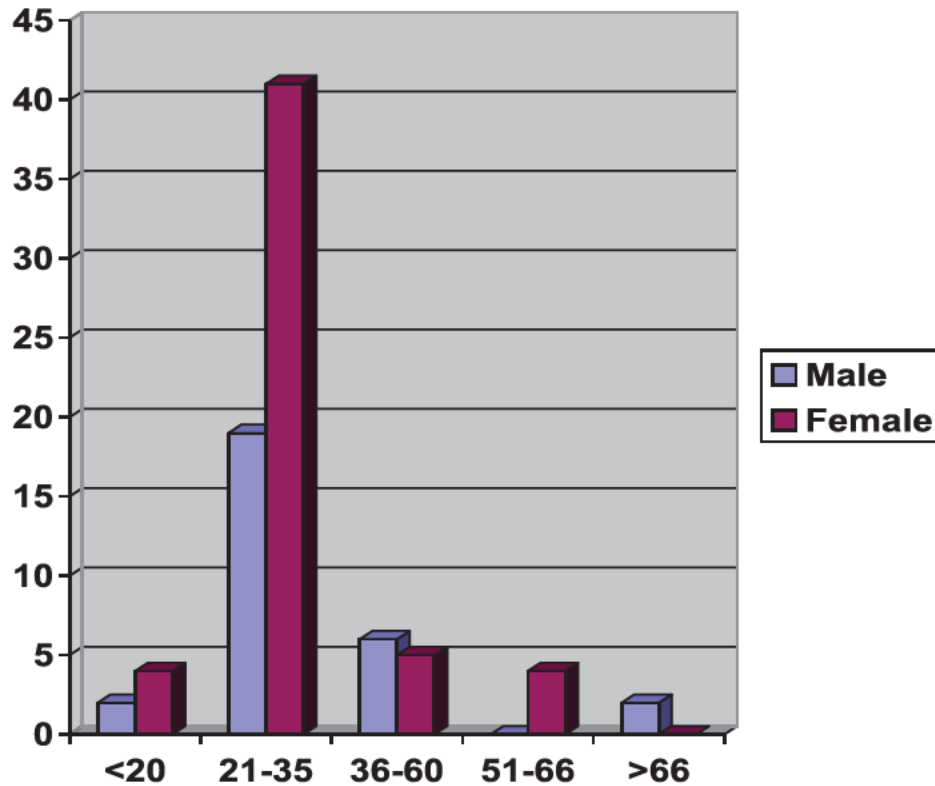


Table 1
Level of Education

Education	Male		Female		Total	
	n	%	n	%	n	%
Primary	0	0	2	3.7	2	2.4
Secondary	2	6.9	5	9.3	7	8.4
University	27	93.1	47	87.0	74	89.2
Total	29	100	54	100	83	100

$X^2 = 1.2277$ df=2

P>0.05

Table 2
Age and gender distribution of patients with previous endodontic treatment experience

Age(years)	≤20		21-35		36-50		51-65		≥66		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Male	0	0	6	20	4	13.3	0	0	1	3.3	11	36.7
Female	2	6.7	13	43.3	2	6.7	2	6.7	0	0	19	63.3
Total	2	6.7	19	63.3	6	20	2	6.7	1	3.3	30	100

$\chi^2 = 5.199$ df= 4 P>0.05

Table 3
Perception of pain among the patients during endodontic treatment

Pain perception	Anticipated pain		Experienced pain	
	n	%	n	%
yes	53	(63.9)	23	(27.7)
No	25	(30.1)	60	(72.3)
Not sure	5	(6.0)	0	
Total	83	(100)	83	(100)

$\chi^2 = 26.124$ df= 1 P=0.000

P<0.001

Table 4
Patients feelings prior to endodontic treatment

	Patients with previous endodontic treatment experience		Patients with no previous endodontic treatment experience		Total	
	n	%	n	%	n	%
Anxious	17	(56.7)	41	(77.4)	58	(69.9)
Not anxious	13	(43.3)	12	(22.6)	25	(30.1)

$X^2 = 3.897$ df=1

P<0.05

Table 5
Patients treatment preference versus recommendation to other patients

Preference	Will never recommend endodontic treatment		Will recommend endodontic treatment		Not sure of recommending endodontic treatment		Total	
	n=83	%	n=83	%	n=83	%	n=83	%
Extraction	9	(10.8)	0		4	(4.8)	13	(15.6)
Endodontic treatment	0		51	(61.5)	17	(20.5)	68	(82.0)
Not sure	0		0		2	(2.4)	2	(2.4)
Total	9	(10.8)	51	(61.5)	23	(27.7)	83	(100)

$X^2 = 63.707$ df=4

P< 0.001

Table 6**Patients assessment of the clinic and treatment received**

Patients' assessment	n	%
Poor	9	(10.8)
Average	22	(26.5)
Good	33	(39.8)
Very good	18	(21.7)
No comment	1	(1.2)

much pain, 56.7% reported little pain and 20% reported no pain during the previous endodontic treatment. 70% were treated by resident doctors, 13.3% were treated by consultants, 13.3% were treated by General dental practitioners and 3.3% were treated by dental students

Pretreatment feelings during present endodontic experience

63.9% of the respondents reported that they expected pain during the root canal treatment while only 27.7% experienced pain during the endodontic treatment (table 3). 58 out of the 83 patients reported that they were anxious about the endodontic treatment they were about to receive (table 4).

Post treatment experience

15.7% of the patients preferred extraction while 82% preferred endodontic treatment to extraction (table 5). 88% were satisfied and rated their treatment and the clinic average to very good (table 6). 8 out of the 9 patients that reported that they would never recommend root canal treatment reported that they experienced pain during the root canal treatment.

DISCUSSION

Endodontic treatment preserves teeth that would otherwise be extracted. In the past, many patients prefer extraction because of the belief that the cause of the pain is removed forever and there is instant relief. The benefit of endodontic treatment includes preservation of teeth, maintenance of natural teeth, avoidance of the high cost of fixed replacement or discomfort of a denture. Aesthetics, function, speech and occlusion is maintained by endodontic treatment. This present study shows that 68 (82%) out of 83 patients preferred endodontic treatment over extraction after receiving endodontic treatment and 61.5% will recommend endodontic treatment to other patients (table 5).

The number of anxious patients with no previous endodontic experience was significantly higher than the number of anxious patient with previous endodontic experience (table 4). 77.4% of the patients without previous endodontic treatment experience were anxious prior to treatment while 56.7% of those with prior root canal

treatment experience were anxious. This suggests that previous endodontic treatment experience may contribute to reduction in anxiety during subsequent endodontic treatment. This is in agreement with the report of American Association of Endodontists⁴ and the findings of Wong and Lytle⁸ who reported that previous endodontic treatment reduced patient's anxiety. However this is in contrast to the report of Stabholz and Peretz¹ who observed no significant difference in the dental anxiety scale of patients with previous endodontic experience and those without.

A study on anticipated and experienced pain associated with endodontic therapy found that pain experienced during endodontic treatment often is less than anticipated⁹. This is in agreement with the present study where 63.9% of the respondents expected pain but only 27.7% experienced pain during the treatment (table 3). Eight out of the nine patients that would not recommend endodontic treatment, experienced pain during the treatment and reported that they do not expect the endodontic treatment to preserve their tooth. This suggests that pain management during endodontic treatment is important to patient's acceptance of the endodontic treatment. Patient education on the advantages of endodontic treatment over extraction needs to be done during consultation and through patient educational materials such as videos and leaflets to increase patient awareness and acceptance of endodontic treatment. 88% of the patients were satisfied with their treatment and rated the clinic and the treatment which they received as average (26.5%), good (39.8%) and very good (21.7%). Only 10.8 % rated the clinic and treatment as poor. Further studies should be carried out to evaluate the success rate and longevity of the endodontic treatment provided by the University dental centre.

Conclusion

Patients' expectation of their tooth being preserved by endodontic treatment was met by the Lagos University Teaching Hospital dental centre. Some patients' dissatisfaction with endodontic treatment is associated with a painful experience. Detailed and continuous training in local anaesthetic technique to ensure pain free endodontic treatment will encourage and increase patient preference for endodontic treatment over extraction.

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