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Original Research

Anxiety level associated with root canal treatment

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ABSTRACT:

Aim: The purpose of this study is to investigate the level of dental anxiety among patients undergoing endodontic treatment. **Materials and Methods:** This is a prospective study composed of a survey was used for the study on a simple of 200 patients aged 18-60 years attending endodontic clinic both male and female. The survey was conducted using electronic copies of questionnaire. Data collected were analysed using SPSS version 23. **Results:** A total of 200 participants responded to the survey, the majority being female and between the age group 18-29 years. Eight patients were found to be fearful of having root canal treatment. Twelve were feeling toward seeing anesthesia needle. Nine were feeling toward waiting while the drill ready. Thirteen were having fear toward pain during pulp removal. Six found fearing toward sensation of root canal files. Five were to be afraid toward unpleasant taste of endodontic solution. Thirteen each were afraid of having multiple radiographs and was found afraid after first visit of root canal treatment. **Conclusions:** Patient anxiety toward endodontic treatment is related to different factors. The important tasks of practitioner to understand patient anxiety and methods to allay.

Key words: Anxiety; Fear; Endodontic treatment

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INTRODUCTION

Dental anxiety is defined as a patient specific reaction toward stress associated with dental treatment in which the stimulus is vague or not present at the moment.¹⁻² It occurs in people who already had a negative dental experiences and who expect the bad experience to be repeated. Other factors that influence the experience of pain are age, gender, oral health, frequency of dental visits, socioeconomic status, and the dentist's way of dealing with the patients.²

Various terms have been used to describe dental anxiety such as dental fear, dental phobia, odontophobia, and apprehensive patient.³ Fear and anxiety towards the dentist and dental treatment are both significant characteristic that contribute to the

avoidance of dental care.⁴ Pain control in dental practice involves the use of known anaesthetics and application of anaesthesia techniques in a safe and effective way.⁵ The aim of this study is to investigate the level of dental anxiety among patients undergoing endodontic treatment.

MATERIALS AND METHODS

This prospective study composed of a survey which was used on a simple size of 200 patients aged 18-60 years attending endodontic clinic. This survey was conducted using an electronic copies of questionnaire. The questionnaire was close-ended. This means that the questions in the survey had specific answers that patients had to choose from. Before the study was

conducted, the Institutional Review Board (IRB) approval was obtained. All patients undergoing endodontic treatment at Riyadh city are included in the sample. Any individual not meeting the inclusion criteria were not included. Data collected were analysed using SPSS version 23.

The questionnaire was comprised of questions about:
 Are you fearful of having root canal treatment?
 Feeling toward seeing anesthetic needle
 Feeling toward waiting while the drill ready
 Feeling pain during pulp removal
 Feeling toward sensation of root canal files
 Feeling toward unpleasant test of endodontic solutions
 Feeling toward having multiple radiograph taken of your tooth
 Feeling after first visit of root canal treatment

RESULTS

Two hundred questionnaires were distributed to dental patients in Riyadh city. One hundred twenty three (61%) of the patients were female and seventy seven (38%) were male. Distribution of patient by age group is shown in table 1. Eight (4.00%) of the patients were found to be fearful of having root canal treatment. Twelve (6.00%) of them were feeling toward seeing anesthesia needle. Nine (4.05%) of the patients were feeling toward waiting while the drill ready. Thirteen (6.05%) of the patient was having fear toward pain during pulp removal. Six (3.00%) of the patient was to be found fearing toward sensation of root canal files. Five (2.05%) of the patient were afraid toward unpleasant taste of endodontic solution. Thirteen (6.05%) of the patient each were afraid of having multiple radiographs and were found afraid after first visit of root canal treatment (Table 2).

Table1: Demographics

Gender	
Male	61.50% (123)
Female	38.50% (77)
Age	
18-29 year	31.00% (62)
30-39 year	26.50% (53)
40-49 year	23.00% (46)
50-60 year	19.50% (39)

Table 2: The percentage of fear of endodontic treatment

Variables	Not at all	Only a little	Some	A lot	No answer
Are you fearful of having root canal treatment?	37.5% (75)	42.0% (84)	16.5% (33)	4.0% (8)	0.0% (0)
Feeling toward seeing anesthetic needle	33.5% (67)	40.0% (80)	20.0% (40)	6.0% (12)	0.5% (1)
Feeling toward waiting while the drill ready	27.0% (54)	49.0% (98)	19.5% (39)	4.5% (9)	0.0% (0)
Are you having fear of feeling pain during pulp removal	21.5% (43)	48.0% (96)	24.0% (48)	6.5% (13)	0.0% (0)
Feeling toward sensation of root canal files	34.5% (69)	44.5% (89)	18.0% (36)	3.0% (6)	0.0% (0)
Feeling toward unpleasant test of endodontic solutions	65.5% (131)	24.0% (48)	8.0% (16)	2.5% (5)	0.0% (0)
Feeling toward having multiple radiograph taken of your tooth	52.0% (104)	27.5% (55)	13.5% (27)	6.5% (13)	0.5% (1)
Feeling after first visit of root canal treatment	25.5% (51)	47.0% (94)	20.0% (40)	6.5% (13)	1.0% (2)

DISCUSSION

The literature shows root canal procedures are commonly believed to have higher level of fear.⁶ However, our survey showed that 42.00% of respondents indicated having a slightl anxious with root canal treatment. A study found 79% patients felt anxious about local anesthetic injection.⁷ Another study also reported 62% of the patient have higher level of anxious seeing anesthetic needle.⁸ Our survey revealed that 40% of patients have only slightly anxious seeing anesthetic needle. When it comes to afraid of drilling the tooth, previous study showed 32.2% of patients were anxious about drilling tooth.¹ Several studies reported that patients reached low anxious during drilling on tooth. A considerable 49 % of patients in the surveyed groups having a slightly anxious toward drilling the tooth was reported.^{7,9}

A recent study found 59% of the patients were afraid of pain during removal of the pulp and while 45% of the patients were found afraid of the sensation of file introduced in the canal.⁸ Also 57% of the patients were afraid of the unpleasant taste of endodontic treatment. However, 48% of patients in our study were having fear of feeling pain during pulp removal and approximately 44.5% of the patients were afraid toward sensation of root canal files. In our study 65.5% of patients feeling unpleasant toward endodontic solutions.

About 26.8% of male and 28.2% of female patients showed to be highly anxious when multiple x-rays were taken.¹ In our study, a nearly 52% of the patient in surveyed groups had no fear when multiple x-ray was taken. Past studies noticed that the highest dental anxiety level was in patients who had root canal treatment as the first dental appointment (40.5%).^{3,10} Our survey showed 49% of the patients have only a little anxiety after first visit of root canal treatment.

CONCLUSIONS

Patient anxiety toward endodontic treatment related to different factors, the important tasks of practitioner to understand patient anxiety and methods to allay.

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