

# Patient's Awareness and Knowledge of Root Canal Treatment (RCT): A Survey-Based Original Research at RIPHAH International

ABDUL HAQ<sup>1</sup>, SAADIA EJAZ BOKHARI<sup>2</sup>, MUHAMMAD ARSLAN RANA<sup>3</sup>, MUTEEN FATIMA<sup>4</sup>, ABDUL REHMAN<sup>5</sup>, ARFA SABIR HUSSAIN<sup>6</sup>

<sup>1</sup>PGR FCPS Operative Dentistry Islamic International Dental College, Riphah International University, Islamabad Pakistan

<sup>2</sup>PGT Dental Materials Riphah International University, Islamabad Pakistan

<sup>3</sup>PGR MDS Operative Dentistry Islamic International Dental College, Riphah International University, Islamabad Pakistan

<sup>4</sup>Islamic International Dental College, Riphah International University, Islamabad Pakistan

<sup>5</sup>PGR FCPS Operative Dentistry FMH College of Medicine and Dentistry, Lahore

<sup>6</sup>Islamic International Dental College, Riphah International University, Islamabad Pakistan

Corresponding author: Abdul Haq

## ABSTRACT

**Objectives:** The goal of this research was to find out whether people's perspectives about root canal therapy have shifted over time in a representative sample of the Islamabad community and, if so, in what ways.

**Materials and Method:** At the Islamic International Dental Hospital, 103 patients underwent a cross-sectional study. The study's goal was to find out how much participants knew about root canal therapy (RCT). Root canal therapy patients completed a self-report questionnaire, which included 18 items with multiple choice answers.

**Results:** 103 patients were studied. Among those 77 out of 103 were females and 26 were males. Out of 103 individuals 20 people had no previous knowledge of treatment, 5 individuals were not interested and the remaining 78 had a varying degree of knowledge. Regarding the fears leading to apprehensive attitude among patients to seek treatment the most common fear was the fear of pain prevailing in 57 out of 103 individuals. Chi-square test was run to analyze association among age groups, gender identity and qualification of the respondents with all the questions from the questionnaire from the twin cities. There was a significant relationship between the knowledge and awareness among patients i.e 0.\_\_\_\_

**Conclusion:** Ache in the tooth is the main cause of patients coming to dental hospitals. The awareness about dental therapy has been elevated among the people but the dentists should still inform and educate the patient about importance of dental health and dental treatments.

**Keywords:** Awareness, Dentistry, Endodontic, Knowledge.

## INTRODUCTION

Patients who receive information about their oral health in a fashion that is easy for them to grasp, remember, and apply to their care are more likely to benefit from the information than patients who do not receive it in this manner. People who have access to the appropriate information are able to have a better knowledge of the significance of keeping good health, take into consideration the various treatment options available to them, and make educated judgments about which therapies are the most successful. People's fears and anxiety about procedures can be helped to some extent by providing them with information that enables them to learn more about such processes.<sup>1</sup>

In endodontics both fundamental and clinical sciences are researched and put into practice. Topics that are covered include the biology of normal pulp, diseases and injuries that affect the pulp, as well as the causes, diagnosis, prevention, and treatment options for these conditions.<sup>2,3</sup> If dental cavities are not treated, the pulpal portion of the tooth has the potential to become infected. A significant proportion of patients have concerns regarding the length of time necessary to perform endodontic therapy as well as the amount of discomfort they should anticipate feeling during the operation.<sup>4,5</sup> The patient's socioeconomic situation, the degree to which they are committed to the treatment, the patient's attitude and conduct, and the patient's personal preference are all factors that have the potential to impact the treatment plan in addition to the severity of the pain and the duration of the treatment.<sup>6</sup>

The practice of endodontics relies heavily on scientific knowledge, as it should. On the other hand, a patient's choice of therapy is frequently influenced by a number of nonclinical circumstances. In the past, research has been conducted to investigate how a patient's educational level and socioeconomic standing influence the dental experiences and expectations they have.<sup>7,8</sup> RCT is frequently cited as a reason why people don't want to undertake it, however this is mostly due to misunderstandings and misconceptions regarding the process. As a consequence of this, the capabilities of patients and the degree to which physicians are able to convince them of the benefits of the treatment are both impacted by these elements. Patient education and knowledge, as well as attitudes toward health and cleanliness, are all extremely important factors in determining whether or not a patient will be

able to overcome their health issues and obtain treatment in a timely manner.

Patients frequently do not finish their course of treatment for the reasons that have been discussed above. They are completely oblivious to the concept of endodontic therapy as well as the potential benefits it could bring to their teeth. When it comes to routine dental care, it is essential for patients to be informed about endodontic therapy and to have a solid understanding of what it entails. This factor plays a key role in determining how smoothly the surgery is carried out for both the patient and the dentist.<sup>9</sup>

## MATERIAL AND METHODOLOGY

The study was distributed among 103 patients who were referred to endodontic department from OPD at Islamic international dental hospital from January to march 2022. An approval from the ethical review board of the hospital was taken, before conducting the study. The survey was online on Google forms but was also conducted in person. Verbal consent was taken from the patients who volunteered to take part in this survey. Any person not willing to be a part of survey was excluded, identities were kept anonymous. the survey targeted the awareness of the endodontic treatment and how educational background, anxiety, and financial stability affects the treatment options for patients and also highlighted the perception of patients about the root canal treatment.

The data collected was analyzed using IBM SPSS (version 26). The chi - square test was run for investigating the difference among the age groups, address of the respondents and gender labeling.

## RESULT

In this study, 103 patients were contacted.. Among those 77 out of 103 were females and 26 were males. Out of 103 individuals 20 people had no previous knowledge of treatment, 5 individuals were not interested and the remaining 78 had a varying degree of knowledge. Regarding the fears leading to apprehensive attitude among patients to seek treatment the most common fear was the fear of pain prevailing in 57 out of 103 individuals. Majority of patients (64) preferred treatment from the specialists.

Chi-square test was run to analyze association among age groups, gender identity and qualification of the respondents with all the questions from the questionnaire from the twin cities.

The data collected was analyzed using IBM SPSS (version 26). The chi - square test was run for investigating the difference among the age groups, qualification of respondents and gender labeling.

The following table shows the age groups that participated in the survey with patients from 20-40 years had the most percentage

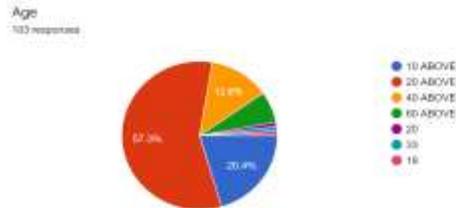


Figure 1: This figure demonstrates the different age groups of the participants

The following table shows gender involvement in the survey with 74.8% being females and 25.2% being males

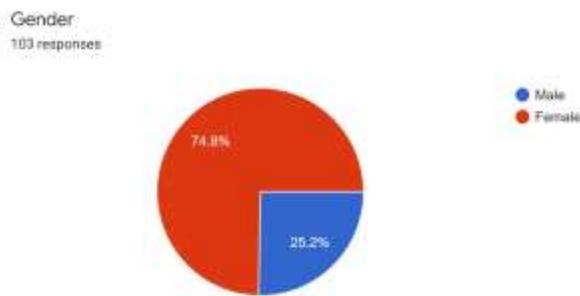


Figure 2: This figure demonstrates the gender participation in the study

The following table shows qualification of the participants with maximum holding graduate degrees with a percentage of 49.5%

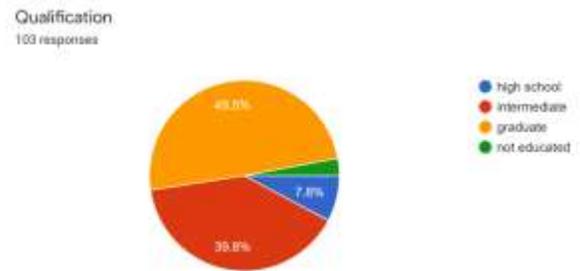


Figure 3: This figure demonstrates the educational background of the participants.

The results from chi square test came both significant and insignificant. Statistically significant results were obtained from association from age group to painful endodontic treatment with p value **0.027** and association of specialist with p value **0.039**. Significant results were obtained for selecting dental office with p value **0.019** and effect of cost on treatment decision with p value of **0.070**

When results in association of age was considered significant results were obtained for endodontic treatment with p value **0.036** and while p value for criteria of selecting the dental office was **0.01**. The influence of price on patient's decision to decide one of the treatment options was also significant with p value **0.069**

From chi square test when the association of question was associated with the age group result were analyzed showed significant association for painful treatment was **0.038** and selection criteria with p value **0.004**. also significant results were obtained about the selection of Islamic international dental hospital and educational status of the patient the p value of **0.055**

Table 1: Following is the table showing results of chi square test with association to gender identity, qualification and age group

S.NO	Questionaries	Response	P value gender	P value age	P value Education
Q1	Have you been treated endodontically?	a. Yes b. No	0.99	0.000	0.026
Q2	How do you recall the endodontic treatment?	a. Well b. Badly c. Not important	0.922	0.036	0.053
Q3	Was the endodontic treatment painful?	a. Yes b. No c. I don't remember	0.027	0.070	0.038
Q4	Who performed the treatment?	a. Student b. House officer c. Experienced dentist d. Endodontist e. I don't know	0.727	0.191	0.104
Q5	What you did to relieve pain in case of toothache?	a. I use home remedies to relieve toothache b. I used use self-prescribed antibiotics and pain killers c. I visited the dentist	0.509	0.212	0.277
Q6	What is your knowledge regarding endodontic treatment?	a. I know a lot b. I ask for details c. I am not interested in the course d. I do not know anything e. Knowledge from media	0.667	0.424	0.133

Q7	What is the important thing that makes you scared of root canal treatment?	a. Pain b. Long treatment times c. Breaking the file in the root canal d. High costs e. Others	0.300	0.125	0.905
Q8	What is your concern about local anesthesia?	a. pain b. numbness c. Fear	0.829	0.155	0.278
Q9	What are the criteria of symptoms confirming your need for endodontic treatment?	a. Toothache during eating b. Toothache when biting c. Strong spontaneous toothache d. Pronounced discoloration of the tooth crown e. Other	0.809	0.993	0.912
Q10	Do teeth become weaker after endodontic treatment?	a. Yes b. No c. I do not know	0.444	0.112	0.441
Q11	Would you take the decision of tooth extraction rather than take endodontic treatment?	a. Yes b. No	0.199	0.663	0.454
Q12	What are your criteria for selecting the person for performing endodontic treatment?	a. Student of dentistry b. Recommended doctor c. Doctor without specialization d. specialist e. Not important	0.039	0.421	0.084
Q13	What were your criteria for selecting dental office?	a. Free of charge treatment b. Professional staff c. Reasonable price d. Painless treatment e. Sservice f. Quick and easy access	0.019	0.001	0.004
Q14	Are you concerned about Long treatment time?	a. Yes b. No	0.664	0.216	0.923
Q15	Why you preferred Islamic International Dental College Hospital Islamabad for endodontic treatment?	a. Professional staff b. Less treatment cost c. Quick and easy access d. Others	0.981	0.530	0.055
Q16	Does the price influence your decision about not taking endodontic treatment?	Yes no	0.070	0.069	0.766
Q17	Did you experience anxiety during the treatment?	Yes no	0.178	0.714	0.571
Q18	Have you experienced pain during or after root canal treatment?	Yes no	0.324	0.623	0.153

## DISCUSSION

This study included 103 patients. Among those 77 out of 103 were females and 26 were males. Out of 103 individuals 20 people had no previous knowledge of treatment, 5 individuals were not interested and the remaining 78 had a varying degree of knowledge. Regarding the fears leading to apprehensive attitude among patients to seek treatment the most common fear was the fear of pain prevailing in 57 out of 103 individuals..

15 were scared of breakage of file during the treatment. 12 individuals were apprehensive due to the high cost and 11 due to the time-consuming nature of the treatment. Among the 103 individuals 57 had a history of previous endodontic treatment out of which 16.5% i.e 17 had a bad experience. 34 out of 103 had a history of painful treatment. 30 out of 103 believed that teeth become weak after endodontic treatment. Regarding the decision to choose extraction over endodontic treatment 30 chose extraction. Majority of patients (64) preferred treatment from the specialists

**Limitation:** The research was conducted for the first time in Islamic international dental hospital some of the limitations in this survey are:

1. Only those people were included in the survey who came to the endodontic department
2. Many variables regarding the root canal treatment were not assessed in the survey

## CONCLUSION

The knowledge of root canal treatment varies from age groups, educational qualification and different races. Toothache has been the main cause of patients coming to dental hospital; because patients avoid dental treatments for as long as they can. The fear of pain and anxiety also caused the delay in visiting a dentist. Islamic international hospital was chosen by most of the patients for its professional treatment and environment and also cost effectiveness in comparison with private clinics.

## REFERENCES

- 1 Sorrell JT, McNeil DW, Gochenour LL, Jackson CR. Evidence-based patient education: knowledge transfer to endodontic patients. *J Dent Educ.* 2009;73(11):1293-305
- 2 Dowd FJ, editor. *Mosby's Review for the NBDE Elsevier Health Sciences*; 2007
- 3 European Society of Endodontology. Quality guidelines for endodontic treatment: consensus report of the European Society of Endodontology. *International Endodontic Journal.* 2006 Dec; 39(12):921-30.
- 4 Khan S, Hamedy R, Lei Y, Ogawa RS, White SN. Anxiety related to nonsurgical root canal treatment: A systematic review. *Journal of endodontics.* 2016 Dec 1; 42(12):1726-36.
- 5 Aldawsari M, Alamri HM. Public knowledge and perception regarding endodontic treatment in a Saudi population. *Journal of International Oral Health.* 2017 Nov 1;9(6):255.
- 6 Schuller AA, Willumsen T, Holst D. Are there differences in oral health and oral health behavior between individuals with high and low

- dental fear? *Community dentistry and oral epidemiology*. 2003 Apr; 31(2):116-21.
- 7 Janczarek M, Cieszko-Buk M, Bachanek T, Chalas R. Survey-based research on patients' knowledge about endodontic treatment. *Pol J Public Health* ;124(3):134-7
- 8 Hajjaj FM, Salek MS, Basra MK, Finlay AY. Non-clinical influences on clinical decision-making: A major challenge to evidence-based practice. *J R Soc Med* 2010;103:178-87
- 9 Sisodia N, Yadav S, Nangia T, Singh P, Yadav M, Singh HP. Dental patients' knowledge, attitude towards endodontics – A survey. *J Pharm Biomed Sci* 2015;5:803
- 10 Doumani M, Habib A, Qaid N, Abdulrab S, Bashnakli AR, Arrojee R. Patients' awareness and knowledge of the root canal treatment in Saudi population: Survey-based research. *Int J Dent Res* 2017;5:89-92
- 11 Habib AA, Dormant MD, Al saysd T, Shams E., Heskul M, Abdulrab S et al. Dental patient's knowledge and awareness about root canal treatment in Syrian population: Survey-based research. *IJRSR*. 2017;8:20583- 6
- 12 SisodiaN, YadavS, NangiaT, SinghP, YadavM, Singh HP. Dental Patients' knowledge and attitude towards Endodontics – A survey. *J Pharm Biomed Scio*. 2015;05:80-83
- 13 Armfield JM, Heaton LJ. Management of fear and anxiety in the dental clinic: a review. *Australian Dental Journal*. 2013;58:390- 407
- 14 Scott DS, Hirschman R. Psychological aspects of dental anxiety in adults. *The journal of the American dental association*. 1982;104:27–31.