

## RESEARCH ARTICLE

# Knowledge, Attitude, and Practice of General Population about Endodontic Treatment

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## ABSTRACT

**Introduction:** Endodontic treatment, also known as endodontic therapy or root canal treatment (RCT), involves the removal of diseased pulpal tissue to prevent and intercept pulpal/periradicular pathosis and protection of the disinfected tooth from future entrenchment by microorganisms.

**Materials and Methods:** An electronic survey was distributed to a random sample of the population in India using widely used social networks. Excluded surveys were those filled by participants <18 years of age or who are part of the dental profession; all other surveys were included in the study.

**Results:** Participants were asked whether they think if antibiotics can resolve an endodontic infection without the need to visit the dentist, only 9.6% said yes. When assessing their knowledge regarding dental pain, they were asked if they believe that any dental pain indicates that the tooth requires endodontic treatment or not, 13.4% agreed while the remaining did not. A total of 73.8% believed that teeth become weaker after an RCT.

**Conclusions:** Within the limitations of the present questionnaire survey, it was concluded that there was a considerable increase in knowledge and awareness regarding endodontic treatment among the Indian population.

**Keywords:** Endodontic treatment, General population, Pain

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## INTRODUCTION

Endodontic treatment, also known as endodontic therapy or root canal treatment (RCT), involves the removal

of diseased pulpal tissue to prevent and intercept pulpal/periradicular pathosis<sup>[1]</sup> and protection of the disinfected tooth from future entrenchment by microorganisms. RCT not only prevents severance of periodontal fibers that help in proprioception for occlusal feedback<sup>[2]</sup> and efficient chewing but also aids in the retention of infected teeth that otherwise might have been extracted.<sup>[3]</sup> Although RCT is highly prevalent but still is perceived by many patients as a procedure to be feared. Studies have reported that fear and anxiety are major deterrents in seeking RCT in general.<sup>[4,5]</sup> These fears can be attributed to the ignorance of patients about root canal procedures. Patients often do not understand the nature of endodontic treatment and what it involves.<sup>[6,7]</sup> This study was conducted to evaluate the general population's knowledge and perception toward endodontic treatments and to evaluate their preference when it comes to different treatment options when provided.

## MATERIALS AND METHODS

An electronic survey was distributed to a random sample of the population in India using widely used social networks. Excluded surveys were those filled by participants <18 years of age or who are part of the dental profession; all other surveys were included in the study. Based on a pilot study and considering the population number, the sample size was calculated with the confidence level set to 95%. The survey contained personal questions including the age, gender, and profession, following that, multiple-choice questions related to endodontics were provided. The collected data were tabulated and analyzed using methods of descriptive analysis using SPSS V.22 (SPSS INC., Chicago, IL, USA).

## RESULTS

A total of 500 responses were received in one month, out of those 56.8% were female, and 43.2% were male. A total of 72.3% had a history of RCT. Participants were asked whether they think if antibiotics can resolve an endodontic infection without the need to visit the dentist, only 9.6% said yes. When assessing their knowledge regarding dental pain, they were asked if they believe that any dental pain indicates that the tooth requires endodontic treatment or not, 13.4% agreed while the remaining did not. A total of 73.8% believed that teeth

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become weaker after an RCT [Table 1]. When analyzing the responses of the participants who had a history of RCT, 58.7% believe that the RCT is more painful than a tooth extraction; only 18.6% mentioned that the RCT was done in a single visit, whereas the remaining 81.4% respondents had the RCT performed in more than one visit. When asked in the case an RCT is indicated, whether they prefer to have an RCT or extract the tooth and replace it with an implant, 79.5% preferred saving the tooth compared to 20.5% chose extraction and implant replacement.

## DISCUSSION

The branch of endodontics is a fast-growing specialty with the availability of recent advances, including various modernistic tools significantly influence the quality and durability of treatment effects. The most common cause of seeking dental treatment is pain, for the alleviation, of which an RCT might be carried out. A study conducted by Klages *et al.* demonstrates that patients visiting the dental office expect pain usually larger than that actually experiencing during treatment.<sup>[8]</sup> People with high dental fear have more probability to delay or avoid dental visiting, and a number of fearful people regularly cancel or fail to show for appointment. It has been noted that trying to manage patients with dental fear is a source of considerable stress for many dentists.<sup>[9-11]</sup> In our study, we found that the pain was the more important patients' concerns associated with RCT.

Sisodia *et al.* reported that 52% of the patients were familiar with the term RCT, while Habib *et al.* stated that 25.3% of the respondents had no knowledge about the treatment, whereas, 21.7% of the respondents knew a lot.<sup>[5,12]</sup> In the present study, 36.7% of respondents knew about the root canal procedure. The knowledge about endodontic treatment came from various sources, including visit to the dental clinic, print and online media, friends, and relatives. In addition, patients can benefit from many forms of local anesthesia, and the use of nitrous oxide, which, according to recent reports, enhances the effect of their actions. Another form of pre-medication is pre-operative intravenous sedatives and

analgesics. In extreme cases, general anesthesia is the alternative.<sup>[13]</sup>

Long treatment time was not a serious barrier in this study in contrast to the previous studies.<sup>[2,5]</sup> About 63.2% of respondents admitted that the treatment time does not influence their decision about not taking endodontic treatment. In our study, we found that the patients choose dental services based on professional experience and treatment costs. Iqbal *et al.*, in their cross-sectional study, concluded that patients choose the dental service provider based on professional experience, staff courtesy, and friendly environment. Costs associated with endodontic treatment are still debatable. Patients often stress that they are too high but adequate to the complexity of the treatment. Nevertheless, more than half of the respondents are willing to pay a higher amount to avoid tooth loss, similarly as in the previous study.<sup>[6,14]</sup>

## CONCLUSIONS

Within the limitations of the present questionnaire survey, it was concluded that there was a considerable increase in knowledge and awareness regarding endodontic treatment among the Indian population. The majority of the population preferred a specialized endodontist to undergo RCT.

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**Table 1:** General knowledge regarding endodontic treatment

Question	Response	Percentage of responses
Can antibiotics alone resolve endodontic infections without the need to visit a dentist?	Yes	9.6
	No	90.4
Does any toothache indicate the need for root canal treatment?	Yes	13.4
	No	86.6
Do teeth become weaker after root canal treatment?	Yes	73.8
	No	26.2

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