

# Augmenting quality of life and mental health through the promotion of accessible root canal therapy

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## Abstract

Root canal therapy (RCT) is an extremely safe, effective, and painless procedure that is crucial to save a tooth that would have been otherwise extracted. As patients with tooth infections present with severe pain and inability to carry out routine oral functions, RCT plays a vital role in improving the quality of life of the patients. The RCT procedure not only plays a crucial role in the relief of physical pain but also significantly contributes to mental well-being. After realizing the benefits of RCT in improving the quality of life and positive impact on the mental well-being of the patients, we anticipate that all patients must timely receive the therapy, but then that is not the case due to the presence of various challenges and factors. The presence of these barriers envisages the need for the formulation of comprehensive policies, expansion of community outreach activities, and education of patients to improve access to RCT. In conclusion, RCT has been associated with multiple benefits. There arises the need to overcome the identified barriers to ensure that RCT becomes more accessible for a wide range of patients needing essential dental services.

**Keywords:** Mental health; quality of life; root canal therapy

## INTRODUCTION

Root canal therapy (RCT) is an extremely safe, effective, and painless procedure that is crucial to save a tooth that would have been otherwise extracted, helping patients to keep their teeth, maintain oral functions, and thereby maintain good dental health.<sup>[1]</sup> This procedure is indicated in case of severe tooth decay, infection or abscess, a fractured or damaged tooth with exposed pulp, persistent toothache, prolonged sensitivity to hot or cold, etc.<sup>[2,3]</sup> It has been shown that a timely RCT can prevent dental complications,

improve the comfort of patients, and avert the need for more invasive procedures in the future.<sup>[1,2]</sup>

## IMPACT OF ROOT CANAL THERAPY ON QUALITY OF LIFE

As patients with tooth infections present with severe pain and inability to carry out routine oral functions, RCT plays a vital role in improving the quality of life of the patients.<sup>[4]</sup> This is predominantly because of the pain relief (because of the removal of the infected tissues), improvement in the oral function as the patient can chew and bite normally without fear of pain, better sleep quality, and a reduced risk of future infections because the source of infection has been removed.<sup>[4,5]</sup> Further, as the procedure can preserve the original tooth, patients are confident in various social interactions and it boosts their self-esteem.<sup>[6]</sup> In addition, as the pain and fear of tooth loss can result in stress and

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anxiety, once it is addressed, patients feel relieved.<sup>[6]</sup> Moreover, this procedure can prevent the need for implants or bridges, which are too expensive, thus contributing to financial relief.<sup>[7]</sup> The combination of all the above reasons improves the overall quality of life, making it a valuable and feasible option for patients.<sup>[4-7]</sup>

## MENTAL HEALTH IMPLICATIONS

The RCT procedure not only plays a crucial role in the relief of physical pain but also significantly contributes to mental well-being.<sup>[1,2,5-7]</sup> This has been attributed to a reduction in anxiety and improvement in the mood of the patients, primarily because of the pain relief and stress associated with the discomfort of a damaged tooth.<sup>[6]</sup> If the affected tooth is visible, patients often feel embarrassed in social and professional settings, and this procedure restores function, self-esteem, and appearance, enabling them to be relaxed in such encounters.<sup>[5]</sup> Patients who have undergone this procedure can focus better on their work instead of being worried about an infected tooth, and this improves their performance.<sup>[1,2]</sup> Moreover, patients after the procedure have no sleep disturbances and so they are less irritable and fatigued. Finally, as the procedure is not very expensive and simultaneously averts the need for other expensive procedures, patients tend to have less financial stress.<sup>[7]</sup> Thus, the mental health implications of the procedure are responsible for contributing to a more comprehensive sense of well-being.<sup>[6]</sup>

## IDENTIFIED CHALLENGES AND POTENTIAL SOLUTIONS

After realizing the benefits of RCT in improving the quality

of life and positive impact on the mental well-being of the patients, we anticipate that all patients must timely receive the therapy, but then that is not the case due to the presence of various challenges and factors [Table 1].<sup>[5,8-13]</sup> The primary barrier is the lack of knowledge about RCT or the perception that the procedure is extremely painful or ineffective, which makes them avoid or delay the treatment.<sup>[5,8]</sup> In continuation, many people are afraid of pain or negative past experiences and this makes them anxious and prevents them from seeking care.<sup>[5]</sup> The next set of challenges is related to the geographical barriers where the people living in rural settings do not have easy access to specialists, and if they want, they have to travel far, which can be a discouraging factor.<sup>[9]</sup> In continuation, the shortage of specialists in rural and remote settings is another cause of concern because of which people delay in receiving care.<sup>[10]</sup>

The next challenge is the high cost of the treatment, especially if the crown has to be placed after the procedure, and this compels people to defer the procedure.<sup>[7,10]</sup> One of the additional related challenges is that most dental insurance schemes cover only a partial cost of the procedure so people without insurance or even with insurance think multiple times about the financial implications before going ahead with the procedure.<sup>[11]</sup> In addition, people from low socioeconomic backgrounds face multiple barriers, and this limits their access to quality dental care services.<sup>[10]</sup> It is the responsibility of the health professionals to communicate the details of the procedure in a language that patients understand and in alignment with their cultural beliefs, and if that's not the case patients do not access treatment.<sup>[12]</sup> Finally, because multiple sittings are required for the procedure, many people do not go citing rigid work schedules and family obligations, making

**Table 1: Identified challenges and potential solutions**

| Identified challenges                 | Potential solutions   |
|---------------------------------------|---|
| Lack of knowledge and misconceptions  | Conduct public awareness campaigns to clear misconceptions and emphasize its benefits and safety<br>Encourage dentists to explain about the procedure and clear their doubts to establish trust<br>Introduce dental education in school curriculum to help students understand about the importance of dental issues and clear any misconceptions |
| Fear of pain and anxiety              | Create learning materials for patients to make them understand that the procedure is safe and less painful<br>Provide sedation to anxious patients to make the overall experience comfortable   |
| Expensive treatment                   | Increase government funding to ensure delivery of subsidized dental care for people from low socioeconomic status<br>Introduce the option to make payments in installments to divide the financial load<br>Strengthen preventive care and provide subsidy on overall therapy  |
| Lack of insurance coverage            | Advocate for launching insurance policies that cover dental procedures<br>Employers can be encouraged to support their employees in these treatments<br>Launch new insurance schemes in collaboration with government to expand insurance programs  |
| Geographical barriers                 | Implement mobile clinics to visit rural or underserved areas for provision of RCT and other dental services<br>Explore the option of teledentistry in initial consultation and follow-ups<br>Provide financial incentive or subsidy on loan rates to dentists who practice in rural settings  |
| Shortage of specialists               | Increase the number of postgraduate residency programs and this will motivate more dentists to pursue specialization<br>Explore the option of teledentistry in initial consultation and follow-ups  |
| Language and cultural barriers        | Create educational materials and consent forms in multiple languages to help patients understand the procedure<br>Sensitize health staff to respect and address diverse beliefs and attitudes toward dental care  |
| Time constraints and work commitments | Extend the work timings, especially in evening to make it feasible for patients<br>Employ efficient techniques and technologies to reduce the number of sittings needed<br>Give patients an opportunity to reschedule their appointments (family or work commitments)   |

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it difficult to prioritize dental care.<sup>[5,7,13]</sup> The presence of these barriers envisages the need for the formulation of comprehensive policies, expansion of community outreach activities, and education of patients to improve access to RCT, as mentioned in Table 1.<sup>[5,8-15]</sup>

## CONCLUSION

RCT has been associated with multiple benefits, including improvement in the quality of life and mental well-being of the patients. There arises the need to overcome the identified barriers to ensure that RCT becomes more accessible for a wide range of patients needing essential dental services.

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## Conflicts of interest

There are no conflicts of interest.

## REFERENCES

1. León-López M, Cabanillas-Balsera D, Martín-González J, Montero-Miralles P, Saúco-Márquez JJ, Segura-Egea JJ. Prevalence of root canal treatment worldwide: A systematic review and meta-analysis. *Int Endod J* 2022;55:1105-27.
2. Wigsten E, Jonasson P, EndoReCo, Kvist T. Indications for root canal treatment in a Swedish county dental service: Patient- and tooth-specific characteristics. *Int Endod J* 2019;52:158-68.
3. Kharkar AP, Reddy KS, Banerjee S, Maheshwari Z. Coping with complexity: Navigating severe curve canals in endodontic root canal treatment: A clinical case series. *J Conserv Dent Endod* 2024;27:785-8.
4. Bamashmous NO, Dhafar W, Turkistani J, Almalik MI, Zaatari R, Bahkali A, *et al.* Oral health-related quality of life following root canal treatment of first permanent molars among children. A cross-sectional study. *Patient Prefer Adherence* 2024;18:991-7.
5. Bansal R, Jain A. An insight into patient's perceptions regarding root canal treatment: A questionnaire-based survey. *J Family Med Prim Care* 2020;9:1020-7.
6. Olivieri JG, de España C, Encinas M, Ruiz XF, Miró Q, Ortega-Martinez J, *et al.* Dental anxiety, fear, and root canal treatment monitoring of heart rate and oxygen saturation in patients treated during the coronavirus disease 2019 pandemic: An observational clinical study. *J Endod* 2021;47:189-95.
7. Zang HL, Zhang Y, Hao XW, Yang L, Liang YH. Cost-effectiveness analysis: Nonsurgical root canal treatment versus single-tooth implant. *BMC Oral Health* 2023;23:489.
8. Pratheebha C, Gayathri R, Veeraraghavan VP, Kavitha S. Knowledge, awareness, and perception on root canal treatment among South Indian population – A survey. *J Adv Pharm Technol Res* 2022;13:S302-7.
9. Barnett T, Hoang H, Stuart J, Crocombe L. The relationship of primary care providers to dental practitioners in rural and remote Australia. *BMC Health Serv Res* 2017;17:515.
10. Gulabivala K, Ng YL. Factors that affect the outcomes of root canal treatment and retreatment—a reframing of the principles. *Int Endod J* 2023;56 Suppl 2:82-115.
11. Borrell LN, Reynolds JC, Fleming E, Shah PD. Access to dental insurance and oral health inequities in the United States. *Community Dent Oral Epidemiol* 2023;51:615-20.
12. da Rosa SV, Moisés SJ, Theis LC, Soares RC, Moisés ST, Werneck RI, *et al.* Barriers in access to dental services hindering the treatment of people with disabilities: A systematic review. *Int J Dent* 2020;2020:9074618.
13. Sharma A, Sharma R, Sharma M, Jain A. Periapical lesion: A single-sitting root canal treatment. *Cureus* 2023;15:e37597.
14. Ghoneim A, D'Souza V, Ebnahmady A, Kaura Parbhakar K, He H, Gerbig M, *et al.* The impact of dental care programs on individuals and their families: A scoping review. *Dent J (Basel)* 2023;11:33.
15. Gao SS, Yon MJ, Chen KJ, Duangthip D, Lo EC, Chu CH. Utilization of a mobile dental vehicle for oral healthcare in rural areas. *Int J Environ Res Public Health* 2019;16:1234.