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Research Article

**KNOWLEDGE AND AWARENESS ABOUT THE PRACTICE OF  
USING RECONSTRUCTIVE ENDODONTIC MATERIALS  
AMONG THE DENTAL SPECIALISTS IN SAUDI ARABIA****Dr. Razan Abu Alqasem M Bosly**

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**Abstract:**

*The present study first perform to update the information and knowledge about the current reconstructive endodontic materials for the Restoration of tooth in Saudi Arabia. About hundred participants answered the questionnaire. As seen in the above results of the survey most of the dental doctors preferred that the choice of the post reinforces the structure of the remaining tooth. The most commonly used prefabricated post was the fiber post and the metal post. Many of the dental doctors preferred composite as the core material when compared to the amalgam. The most commonly used cement for the Cementation of the post was glass ionomer. It was found that there was less knowledge about the long-term clinical performance of various cements that was used for the Cementation of the post. The hospitals of each area should focus on staff training about the recent updates of the reconstructive endodontic materials used in tooth restoration. We should focus on strengthening the prevention of dental caries in different regions of the world to avoid the pain and discomfort among the patients. Proper information should be available on the materials that are used for dental restoration.*

**Keywords:** *Reconstructive endodontic materials, Restoration of tooth, prefabricated post, Cementation of the post, glass ionomer, composite resins, amalgam, fiber post, metal post.*

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**INTRODUCTION:**

Reconstructive endodontic treatment is to retain the desired function and occlusion of the tooth and stabilize the arch of the dental cavity [1]. In the previous ages it was difficult to restore teeth and hence they were extracted. In present times using the endodontic therapy we can easily restore and reconstruct a tooth [2].

However the Restoration and reconstruction of the tooth endodontically has many problems due to loss of the tooth structure by caries, fracture, previous restorations and trauma [3]. If we followed a proper treatment plan for the endodontic reconstructive therapy we can restore and reconstruct a tooth successfully.

An important factor in the success of endodontic treatment is its final restoration. If after the root canal treatment improper Restoration is done it may lead to tooth extraction [4]. Proper guidelines to be followed for the prognosis of root canal treated teeth [5]. The Restoration and Reconstruction of the endodontically treated teeth is still controversial due to many factors associated with it.

One of the most common failure cause of endodontic treatment is coronal micro leakage [6]. In order to avail temporary and permanent coronal Restoration and reconstruction it is important for the clinical success of endodontic treatment [7].

With regard to the literature there are many studies published providing information regarding to the Restoration of endodontically treated teeth, but there is a lack in information provided for the proper treatment protocol followed by the General physician [8, 9].

**RATIONALE BEHIND THIS STUDY:**

The main reason to select this topic is to investigate about the different reconstructive endodontic materials and treatment techniques used in the Restoration of endodontically treated teeth in Saudi Arabia. With this study we can access and evaluate the knowledge of the attitudes of the dental physicians towards the Restoration of endodontically treated teeth.

**AIM & OBJECTIVES:**

The main aim of this study is to evaluate the knowledge of the dental specialists about the use of

current restorative endodontic materials for the restoration of the tooth. This can be attained by:

- Conducting a survey to determine the knowledge of the dental Specialists about the current restorative endodontic materials used by them to restore a tooth.
- Identifying the choice of restorative endodontic material category used by the dental specialist in the Restoration of the tooth.
- Creating awareness among the dental physicians about the latest updates in current restorative endodontic materials.

**METHODOLOGY:**

After reviewing the literature regarding the endodontic reconstructive therapy, questionnaire was selected from one of the previous studies and the modification were done in order to meet the requirement of the present study.

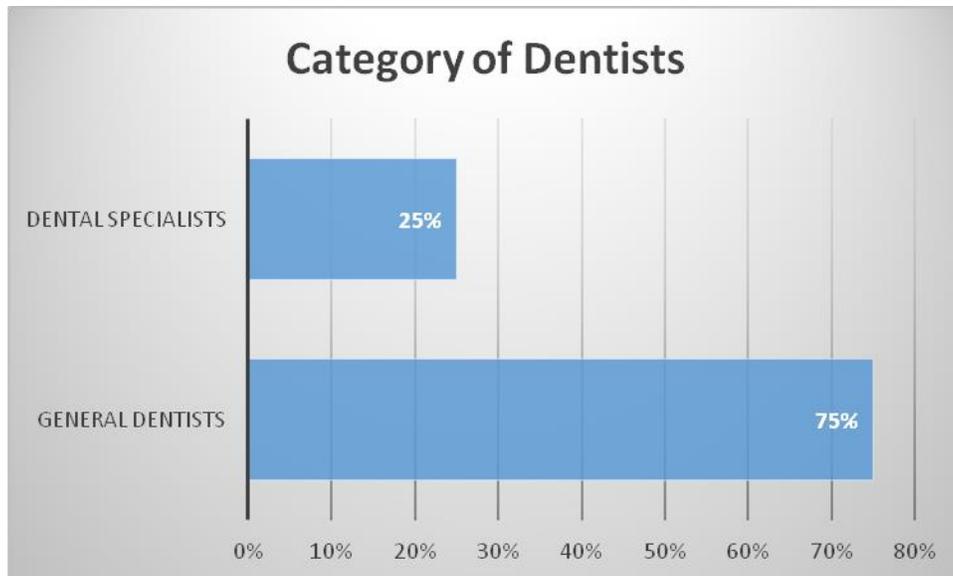
The final questionnaire was distributed online via email to different dental physician in Saudi Arabia. Questionnaire consisted of the basic demographic information about the dental doctors and also single answer multiple choice type questions related to the choice of material used for reconstructive endodontic treatment. This study includes the general dentist and also the dental Specialists that are associated with reconstructive endodontic therapy.

**DATA ANALYSIS:**

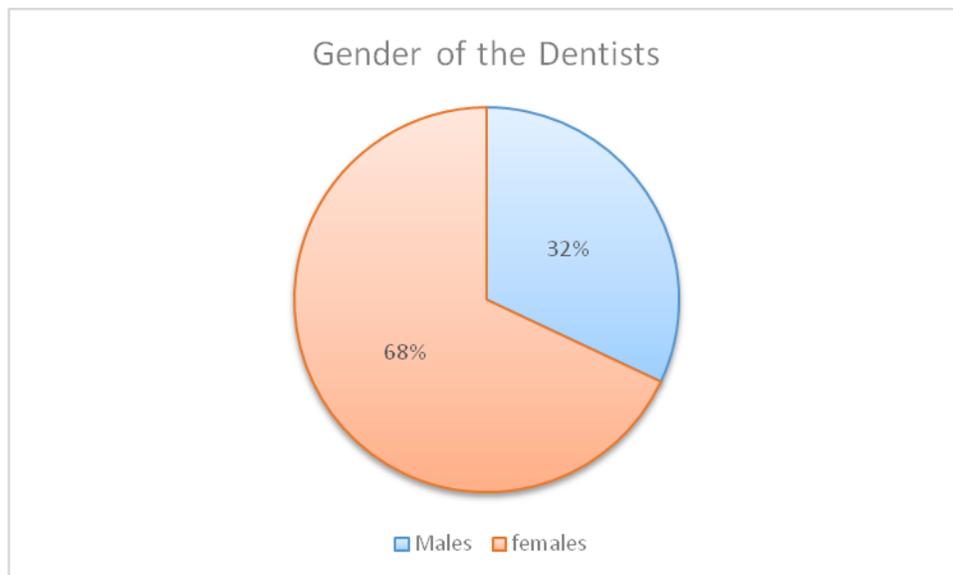
The data that was collected from the questionnaire was analyzed using the computer software SPSS 16. The frequencies and percentages of the responses from the dental doctor's and specialist using the P value equal to or less than 0.05.

**RESULTS:**

The questionnaire that was distributed online via email among various general dentist and specialist. About 100 doctors responded to the study. About the 75% of the dental doctors where general dentist and remaining 25% where dental specialist. The participants have more of females about 68% and 32% were males.



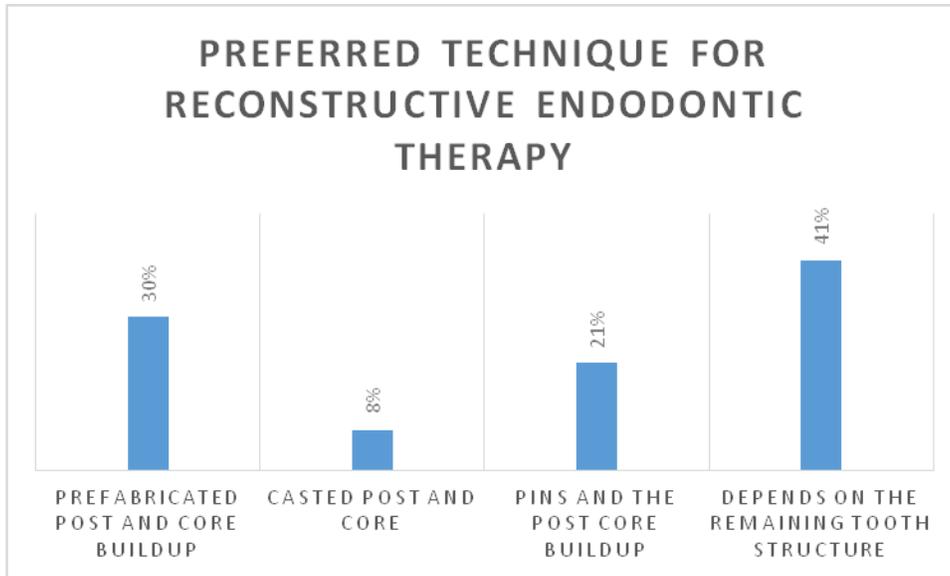
GRAPH. No: 1 showing the Category of the dentists



GRAPH. No: 2 showing the Gender of the Dentists

The total mean number of endodontically treated teeth per year by the dental doctors was about 172.5. The mostly selected response for the preferred

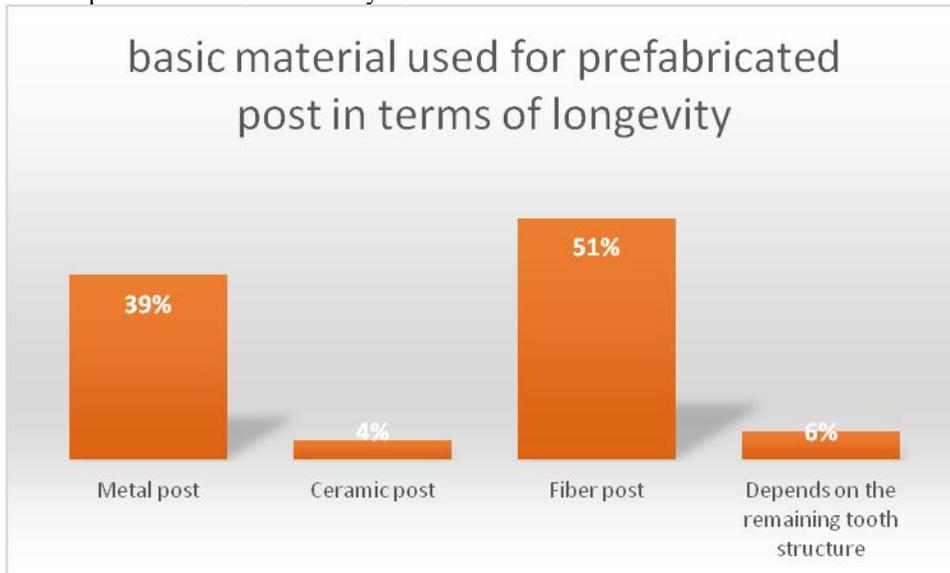
technique reconstructive endodontic treatment was: depends on the remaining tooth structure of the tooth to be restored.



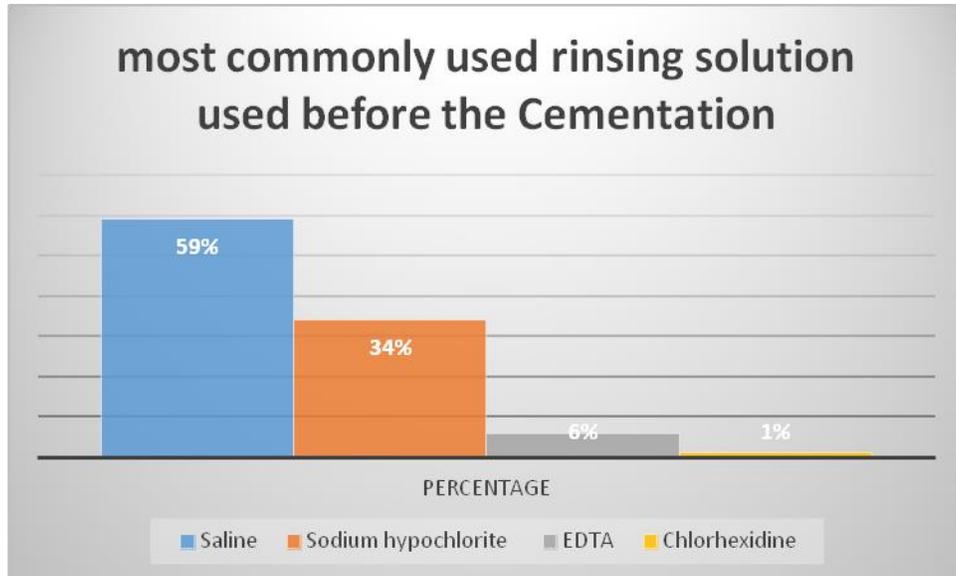
GRAPH. No: 3 showing the preferred Technique for Reconstructive endodontic therapy

According to most of the dentist the basic material used for prefabricated post in terms of longevity is fiber post and metal post. The most commonly used

rinsing solution used before the Cementation is saline water followed by Sodium hypochlorite.



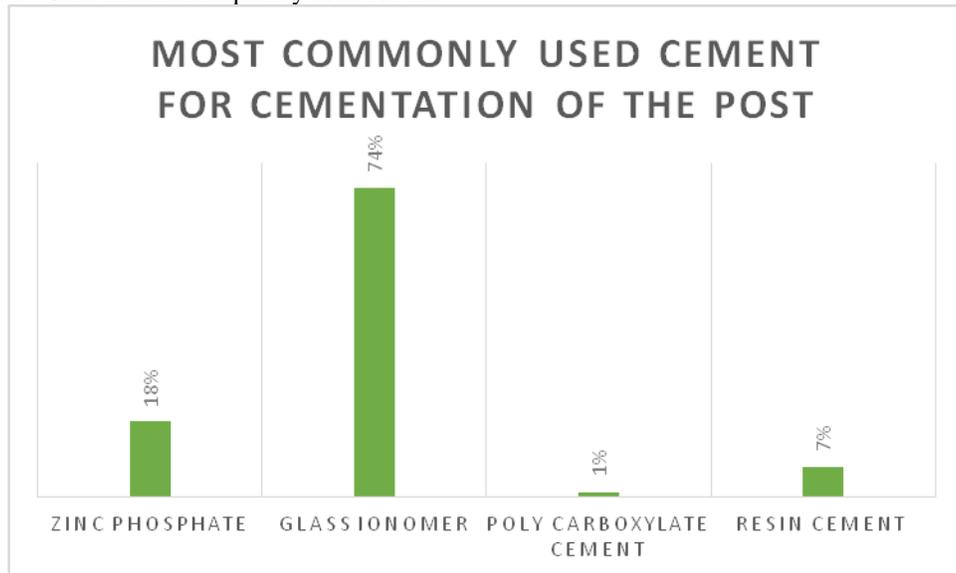
GRAPH. No: 4 showing the basic material used for prefabricated post in terms of longevity



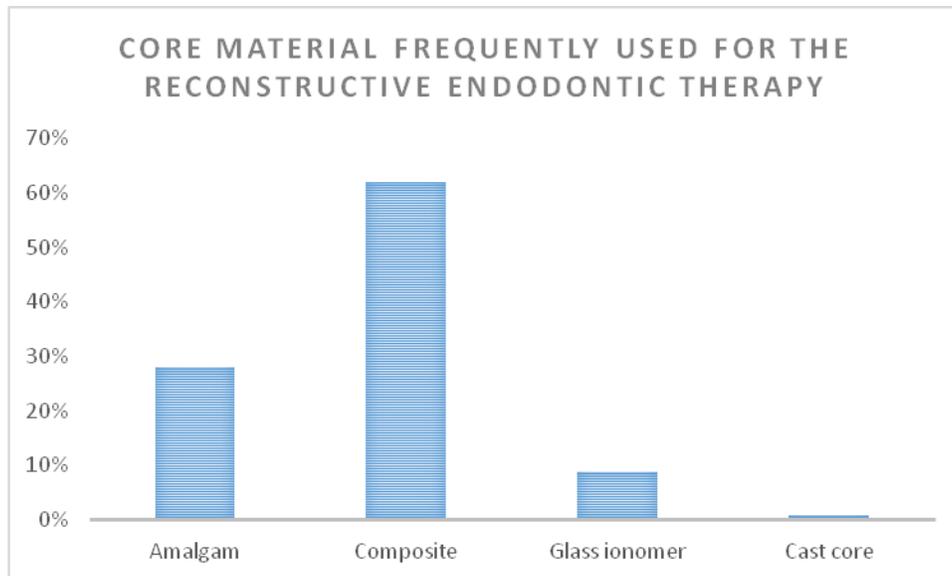
GRAPH. No: 5 showing the most commonly used rinsing solution used before the cementation

The most commonly used cement for Cementation of the post by the dentist is glass ionomer followed by zinc phosphate. Core material frequently used for the

reconstructive endodontic therapy by the dentist is composite followed by amalgam.



GRAPH. No: 6 showing the most commonly used cement for cementation of the post



GRAPH. No: 7 showing the core material used for reconstructive endodontic therapy

According to most of the dentist the common factor failure of endodontically treated tooth is the crown fracture followed by endodontic failure.

#### DISCUSSION:

A representative survey was conducted all over Saudi Arabia to update about the recent advancement in the use of current reconstructive endodontic materials. The response rate of all the participants was satisfactory. The present study first perform to update the information and knowledge about the current reconstructive endodontic materials for the Restoration of tooth in Saudi Arabia.

About hundred participants answered the questionnaire. As seen in the above results of the survey most of the dental doctors preferred that the choice of the post reinforces the structure of the remaining tooth. The most commonly used prefabricated post was the fiber post and the metal post. Many of the dental doctors preferred composite as the core material when compared to the amalgam. The most commonly used cement for the Cementation of the post was glass ionomer.

It was found that there was less knowledge about the long-term clinical performance of various cements that was used for the Cementation of the post. It has been seen that the materials that are used in the reconstructive Endodontics may stain the teeth [15]. Thus the choice of the material should not be basically based on the biological and functional criteria but also aesthetic consideration should be taken into account [16].

#### CONCLUSION:

In this study we evaluated the knowledge of the dental Specialists and the general dentist about the use of current endodontic reconstructive material used for tooth restoration. We also created an awareness among all the dental doctors about the variety of materials used for reconstructive techniques.

The hospitals of each area should focus on staff training about the recent updates of the reconstructive endodontic materials used in tooth restoration. We should focus on strengthening the prevention of dental caries in different regions of the world to avoid the pain and discomfort among the patients. Proper information should be available on the materials that are used for dental restoration.

It is found that it is a matter of urgency for the oral health research community to strengthen the operational research with the relation to the dental restorative materials used in tooth restoration. Increase in training and educating the students about appropriate skills to perform the procedures to restore the tooth correctly. There may be a variation in the method of teaching, training, techniques and technologies that are used in tooth restoration, but this is important to update the students as well as the practicing dental doctors about advancement of techniques used in tooth restoration.

#### ETHICAL CONSIDERATIONS:

Compliance with ethical standards

**Ethical approval:** This research has an Ethical approval for the study of the dental doctors about the knowledge and awareness about the use of reconstructive endodontic materials for tooth restoration.

**Conflict of interest:** The authors do not have any commercial associations that might pose or create a conflict of interest with information presented in this communication. No intramural or extramural funding supported any aspect of this work.

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