



## **Assessing patient satisfaction levels after undergoing various periodontal treatments such as scaling and root planing, periodontal surgery, and laser therapy.**

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**Abstract:**

**Objective:** This study aimed to assess patient satisfaction levels after undergoing different periodontal treatments, including scaling and root planing, periodontal surgery, and laser therapy. By understanding patient satisfaction, valuable insights can be gained into the effectiveness of these interventions and the overall patient experience.

**Methods:** A sample of patients who received scaling and root planing, periodontal surgery, or laser therapy was recruited. Demographic characteristics, including age, gender, and education, were recorded. Patient satisfaction levels, treatment effectiveness, pain management, and post-treatment recovery were evaluated using a structured questionnaire. Data were analyzed to determine the percentage of participants reporting high satisfaction levels, treatment effectiveness, minimal pain, and quick recovery for each treatment modality.

**Results:** The results indicated that patients across all three treatment groups generally experienced high levels of satisfaction. Laser therapy stood out with the highest percentage of

participants reporting high levels of overall satisfaction (66.7%), followed by periodontal surgery (43.7%) and scaling and root planing (49.4%). The majority of participants rated the treatments as very effective or effective, with laser therapy demonstrating the highest percentage of participants reporting very effective results (56.3%). Regarding pain management, laser therapy had the highest percentage of participants reporting minimal pain (80.5%), followed by scaling and root planing (67.8%) and periodontal surgery (52.9%). In terms of post-treatment recovery, laser therapy showed the highest percentage of participants reporting quick recovery (60.9%).

**Conclusion:** The findings suggest that patients generally experience high levels of satisfaction after undergoing periodontal treatments, including scaling and root planing, periodontal surgery, and laser therapy. Laser therapy appears to offer advantages in terms of higher patient satisfaction, perceived treatment effectiveness, minimal pain, and quicker recovery. These findings emphasize the potential benefits of incorporating laser therapy into periodontal treatment plans, leading to improved patient satisfaction and treatment outcomes.

**Keywords:** patient satisfaction, periodontal treatments, scaling and root planing, periodontal surgery, laser therapy

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### **Introduction:**

Periodontal diseases, including gingivitis and periodontitis, are prevalent oral health conditions that affect a substantial portion of the global population. These diseases involve inflammation and infection of the gums and supporting structures, leading to potential tooth loss and systemic health complications if left untreated. To combat these conditions, various periodontal treatments have been developed, ranging from non-surgical approaches such as scaling and root planing to more advanced procedures like periodontal surgery and laser therapy. While these interventions aim to restore oral health and prevent disease progression, the assessment of patient satisfaction after undergoing such treatments is of paramount importance for evaluating their overall efficacy and patient-centered outcomes<sup>1-4</sup>.

Patient satisfaction plays a vital role in healthcare delivery as it reflects the patient's perception of the treatment process and

outcomes. It encompasses multiple dimensions, including the patient's experiences, expectations, perceived treatment effectiveness, and overall contentment with the provided care. Evaluating patient satisfaction levels following periodontal treatments allows dental professionals to gain valuable insights into treatment efficacy, patient experiences, and areas for improvement. Moreover, understanding patient satisfaction helps in developing patient-centered approaches, optimizing treatment outcomes, and fostering a positive therapeutic alliance between the clinician and the patient<sup>5,6</sup>.

This research aims to comprehensively assess patient satisfaction levels after undergoing various periodontal treatments, specifically scaling and root planing, periodontal surgery, and laser therapy. By conducting a systematic evaluation of patient-reported outcomes, subjective experiences, and overall satisfaction, this study seeks to provide valuable insights into

the patient's perspective on these commonly employed interventions.

### **Materials and methods:**

#### **Study Design:**

This study adopts a cross-sectional design to assess patient satisfaction levels after undergoing different periodontal treatments, including scaling and root planing, periodontal surgery, and laser therapy. The study aims to gather patient-reported outcomes and subjective experiences to evaluate treatment effectiveness and patient-centered outcomes.

#### **Participants:**

The study included adult patients (18 years or older) who have recently undergone one of the three periodontal treatments (scaling and root planing, periodontal surgery, or laser therapy) at OPD, Department of periodontics, Maulana Azad institute of dental sciences, New Delhi. Participants were recruited through convenience sampling, and written informed consent were obtained from each participant prior to their inclusion in the study.

#### **Data Collection:**

Data were collected using validated questionnaire specifically designed to assess patient satisfaction levels and treatment experiences. The survey instrument included multiple domains, covering aspects such as pain management, treatment outcomes, esthetic improvements, post-treatment recovery, and patient education. The surveys

were administered either in person or electronically, depending on the participants' preference and logistical feasibility.

#### **Survey Development:**

The survey instrument was developed based on a comprehensive review of existing literature, previously validated tools, and input from experts in the field of periodontics. The survey had undergone a pilot testing phase to ensure its clarity, relevance, and reliability. Feedback from the pilot test participants were used to refine the survey instrument before its final implementation.

#### **Data Analysis:**

The collected data were analyzed using appropriate statistical methods to assess patient satisfaction levels and identify significant factors influencing patient experiences. Descriptive statistics, such as means, frequencies, and percentages, were used to summarize the data. Inferential statistics, such as chi-square tests, t-tests, or analysis of variance (ANOVA), were employed to explore the associations between different variables and patient satisfaction levels.

#### **Statistical Power and Sample Size:**

The sample size was determined based on statistical power calculations, aiming for an adequate number of participants to detect significant differences in patient satisfaction levels among the treatment groups. The power analysis considered effect size, alpha level, and desired statistical power.

## Results :

Table 1: Demographic Characteristics of Participants

Variable	Scaling and Root Planing	Periodontal Surgery	Laser Therapy
Age (mean±SD)	45.2±6.8	50.6±7.2	48.9±6.5
Gender			
- Male	35 (40.2%)	25 (28.7%)	18 (20.7%)
- Female	52 (59.8%)	62 (71.3%)	69 (79.3%)
Education			
- High school	19 (21.8%)	15 (17.2%)	13 (14.9%)
- College	46 (52.9%)	55 (63.2%)	47 (54.0%)
- Graduate	22 (25.3%)	17 (19.5%)	27 (31.0%)

Note: SD = standard deviation

Table 2: Patient Satisfaction Levels and Treatment Experiences

Variable	Scaling and Root Planing	Periodontal Surgery	Laser Therapy
Overall Satisfaction			
- Very Satisfied	43 (49.4%)	38 (43.7%)	58 (66.7%)
- Satisfied	37 (42.5%)	43 (49.4%)	26 (29.9%)
- Neutral	7 (8.0%)	6 (6.9%)	3 (3.4%)
Treatment Effectiveness			
- Very Effective	39 (44.8%)	29 (33.3%)	49 (56.3%)
- Effective	44 (50.6%)	52 (59.8%)	38 (43.7%)
- Neutral	4 (4.6%)	6 (6.9%)	0 (0.0%)
Pain Management			
- Minimal Pain	59 (67.8%)	46 (52.9%)	70 (80.5%)
- Moderate Pain	25 (28.7%)	36 (41.4%)	16 (18.4%)
- Severe Pain	3 (3.4%)	5 (5.7%)	2 (2.3%)
Post-Treatment Recovery			
- Quick Recovery	46 (52.9%)	39 (44.8%)	53 (60.9%)
- Moderate Recovery	36 (41.4%)	39 (44.8%)	32 (36.8%)
- Slow Recovery	5 (5.7%)	9 (10.3%)	3 (3.4%)

The results presented in Table 1 provide an overview of the demographic characteristics of the participants who underwent scaling and root planing, periodontal surgery, and laser therapy. The mean age of participants ranged from 45.2 to 50.6 years across the three treatment groups. The gender

distribution varied slightly, with a higher proportion of females in the laser therapy group (79.3%) compared to the other treatment groups. In terms of education, the majority of participants in all three groups had completed college education.

Table 2 presents the patient satisfaction levels and treatment experiences reported by participants across the different periodontal treatments. Overall, the majority of participants expressed high levels of satisfaction with their treatments. Laser therapy had the highest percentage of participants reporting being very satisfied (66.7%), followed by periodontal surgery (43.7%), and scaling and root planing (49.4%). Similarly, the majority of participants rated the effectiveness of the treatments as very effective or effective, with laser therapy showing the highest percentage of participants reporting very effective results (56.3%).

Regarding pain management, the majority of participants across all treatment groups reported minimal pain during the procedures. Laser therapy had the highest percentage of participants reporting minimal pain (80.5%), followed by scaling and root planing (67.8%), and periodontal surgery (52.9%). In terms of post-treatment recovery, the majority of participants reported quick recovery across all treatment groups, with laser therapy showing the highest percentage of participants reporting quick recovery (60.9%).

Overall, the results indicate that patients generally experienced high levels of satisfaction across all three periodontal treatments. Laser therapy, in particular, seemed to yield higher satisfaction levels, perceived treatment effectiveness, and minimal pain compared to scaling and root planing and periodontal surgery. These findings highlight the potential benefits of

laser therapy in achieving positive patient experiences and treatment outcomes.

### **Discussion:**

Assessing patient satisfaction levels after undergoing various periodontal treatments, such as scaling and root planing, periodontal surgery, and laser therapy, provides valuable insights into the effectiveness of these interventions and the overall patient experience. Understanding patient satisfaction is crucial in evaluating the success of periodontal treatments and improving patient-centered care. In this discussion, we will explore the findings related to patient satisfaction and their implications for the different treatment modalities<sup>7-12</sup>.

The results indicate that patients generally experienced high levels of satisfaction across all three periodontal treatments. Laser therapy, in particular, stood out as having the highest percentage of participants reporting high levels of overall satisfaction. This finding suggests that laser therapy may offer distinct advantages in terms of patient satisfaction compared to scaling and root planing and periodontal surgery. The positive patient experiences associated with laser therapy may be attributed to its minimally invasive nature, reduced discomfort, and faster healing. These aspects contribute to a positive treatment experience, which is an essential component of patient satisfaction.

The perceived effectiveness of the treatments is another important aspect evaluated in this study. The majority of participants across all treatment groups rated the interventions as effective or very effective. This finding indicates that scaling

and root planing, periodontal surgery, and laser therapy are capable of achieving satisfactory treatment outcomes from the patients' perspective. The high percentage of participants reporting very effective results in laser therapy further supports the notion that this treatment modality can offer improved treatment outcomes and positively influence patient satisfaction.

Pain management is a critical factor in assessing patient satisfaction after periodontal treatments<sup>13</sup>. The results reveal that the majority of participants reported minimal pain during the procedures across all treatment groups. This finding highlights the importance of effective pain management techniques employed by dental professionals, ensuring a comfortable experience for patients. Laser therapy, in particular, demonstrated the highest percentage of participants reporting minimal pain, indicating its potential advantage in reducing discomfort during and after the treatment. This finding aligns with previous research suggesting that laser therapy can provide a more comfortable and less painful experience for patients.

Post-treatment recovery is another significant aspect influencing patient satisfaction<sup>14,15</sup>. The majority of participants in all treatment groups reported quick recovery after their respective treatments. This finding indicates that scaling and root planing, periodontal surgery, and laser therapy were generally well-tolerated by patients and resulted in satisfactory recovery periods. Laser therapy showed the highest percentage of participants reporting quick recovery, suggesting that this treatment modality may lead to faster healing and less

downtime compared to the other interventions.

Overall, the findings from assessing patient satisfaction levels after various periodontal treatments indicate that all three modalities, scaling and root planing, periodontal surgery, and laser therapy, can provide satisfactory treatment outcomes and positive patient experiences. However, laser therapy appears to offer advantages in terms of higher patient satisfaction, perceived treatment effectiveness, minimal pain, and quicker recovery. These findings emphasize the potential benefits of incorporating laser therapy into periodontal treatment plans, considering its potential to improve patient satisfaction and treatment outcomes.

#### **Conclusions:**

In conclusion, assessing patient satisfaction levels after undergoing scaling and root planing, periodontal surgery, and laser therapy provides valuable insights into the effectiveness of these interventions and the overall patient experience. The findings indicate that patients generally experienced high levels of satisfaction across all three treatments. Laser therapy, in particular, emerged as the treatment modality with the highest percentage of participants reporting high satisfaction levels. This suggests that laser therapy may offer distinct advantages in terms of patient satisfaction, attributed to its minimally invasive nature, reduced discomfort, and faster healing.

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