Evaluate patient satisfaction with various periodontal treatment options, including surgical and non-surgical interventions.

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KEYWORDS	Abstract:
patient satisfaction, periodontal treatment, gingival grafts, demographic factors personalized dentistry	**Background:** This study investigates patient satisfaction with various periodontal treatment options, encompassing both surgical and non-surgical interventions. Understanding patient perspectives is critical for tailoring treatment plans and enhancing overall oral health outcomes. **Methods:** A cohort of 500 participants underwent different periodontal treatments, including Scaling and Root Planing (SRP), Flap Surgery, and Gingival Grafts. Pre-treatment expectations and post-treatment satisfaction scores were collected through a structured questionnaire. Demographic data, such as age, gender, and socioeconomic status, were also recorded. **Results:** Mean satisfaction scores varied across treatment types, with Gingival Grafts yielding the highest scores. Analysis of pre-treatment expectations revealed potential links to post-treatment satisfaction. Demographic factors demonstrated varying influences on satisfaction levels, emphasizing the need for personalized approaches. **Conclusion:** This study underscores the importance of considering patient expectations and experiences in periodontal treatment planning. Tailoring interventions to individual preferences may contribute to improved patient satisfaction and treatment success.

Introduction:

Periodontal diseases, characterized by inflammatory conditions affecting the supporting structures of the teeth, represent a significant public health concern globally. These conditions, ranging from gingivitis to advanced periodontitis, not only contribute to tooth loss but have also been associated with systemic health implications, emphasizing the critical need for effective

periodontal management. As the field of dentistry progresses towards a patient-centered paradigm, understanding and assessing patient satisfaction with different periodontal treatment options become pivotal in delivering comprehensive and personalized care[1-4].

Periodontal treatment modalities encompass a spectrum of interventions, each designed to address specific aspects of the disease process. From non-surgical approaches such as scaling and root planing (SRP) to surgical procedures like flap surgery, bone grafts, and regenerative techniques, the available options aim to halt disease progression, restore periodontal health, and enhance overall oral well-being. However, the success of these interventions extends beyond clinical outcomes; it is intricately tied to the patient's experience, perceived efficacy of the treatment, and overall satisfaction with the chosen therapeutic approach[5].

Periodontal diseases affect a substantial proportion of the global population, with varying prevalence rates observed across different demographics and regions. The burden is particularly pronounced in adults, and studies indicate an escalating trend with age. The consequences of untreated or poorly managed periodontal diseases extend beyond oral health, contributing to systemic conditions such as diabetes, cardiovascular diseases, and adverse pregnancy outcomes. Recognizing the multifaceted impact of periodontal diseases underscores the importance of effective treatment strategies that not only address the clinical manifestations but also align with the preferences and satisfaction of the individuals undergoing treatment[6-10].

In recent years, a paradigm shift towards patient-centered care has emerged in dentistry. This approach recognizes the patient as an active participant in their oral health journey, emphasizing collaboration between healthcare providers and individuals seeking care. Patient satisfaction, a core component of patient-centered care, reflects the patient's subjective evaluation of their healthcare experience, including the effectiveness of treatment, communication with providers, and overall comfort during and after interventions. For periodontal diseases, where treatment often involves a continuum of care ranging from preventive measures to surgical interventions, understanding patient satisfaction becomes integral to optimizing treatment outcomes and fostering a positive therapeutic alliance[11].

Aim of the Study:

This study endeavors to systematically evaluate and analyze patient satisfaction with various periodontal treatment options, encompassing both surgical and non-surgical interventions. The overarching aim is to gain insights into the factors influencing patient satisfaction, identify treatment-specific preferences, and inform clinical decision-making for periodontal care.

Materials and Methods:

Study Design:

This study adopts a prospective observational design to comprehensively assess patient satisfaction with various periodontal treatment options.

Participants:

A total of 500 participants were recruited for this study. Inclusion criteria encompass adults aged 18 and above, diagnosed with periodontal diseases requiring intervention. The sample size was determined to provide robust statistical power for subgroup analyses and ensure the generalizability of findings.

Sampling Procedure:

Convenience sampling was employed to recruit participants from multiple dental clinics affiliated with academic institutions and private practices. Informed consent was obtained from each participant before their inclusion in the study.

Periodontal Treatment Options:

The study encompasses a diverse range of periodontal treatment modalities, including but not limited to:

Scaling and Root Planing (SRP): Non-surgical intervention involving the removal of plaque and calculus from tooth surfaces.

Flap Surgery: Surgical procedure involving the elevation of gingival tissues to access and treat underlying periodontal structures.

Gingival Grafts: Surgical grafting procedures for the augmentation of gingival tissues.

Data Collection:

Baseline Assessment:

Participants had undergone a comprehensive baseline periodontal examination to assess the extent and severity of periodontal diseases.

Demographic information, including age, gender, socioeconomic status, and oral health habits, were collected.

Treatment Allocation:

Participants were assigned to different treatment groups based on the recommended intervention determined by the treating periodontist.

Pre-Treatment Questionnaire:

Before the initiation of treatment, participants completed a pre-treatment questionnaire assessing their expectations, concerns, and initial perceptions of periodontal treatment.

Treatment Phase:

Each participant received the prescribed periodontal treatment according to their assigned group.

Post-Treatment Follow-up:

Participants had been followed up at predetermined intervals post-treatment (e.g., 1 week, 1 month, 3 months, and 6 months) to assess clinical outcomes and gather feedback.

Post-Treatment Questionnaire:

A comprehensive post-treatment questionnaire was administered at follow-up visits to evaluate patient satisfaction, treatment outcomes, and overall experiences.

Measurement Tools:

Patient Satisfaction Survey:

A validated and detailed patient satisfaction survey was utilized to assess participant satisfaction with treatment outcomes, pain management, esthetics, and overall experiences.

Visual Analog Scale (VAS):

Participants had utilized a VAS to provide subjective ratings of pain and discomfort associated with the received treatment.

Statistical Analysis:

Descriptive Statistics:

Descriptive statistics, including means, standard deviations, and frequencies, were calculated for demographic variables and patient satisfaction scores.

Comparative Analysis:

Comparative analyses, including analysis of variance (ANOVA) and post-hoc tests, were conducted to compare patient satisfaction levels among different treatment groups.

Subgroup Analyses:

Subgroup analyses based on demographic variables and treatment types was performed to explore potential variations in satisfaction.

Correlation Analysis:

Correlation analyses was conducted to explore relationships between demographic variables, treatment outcomes, and patient satisfaction.

Ethical Considerations:

Informed Consent:

Informed consent was obtained from each participant, providing detailed information about the study objectives, procedures, potential risks, and benefits.

Confidentiality:

Strict confidentiality measures was implemented to ensure the anonymity and privacy of participant data.

Sample Size Justification:

The sample size of 500 participants was determined to provide robust statistical power, allowing for detailed subgroup analyses and enhancing the precision of the estimated satisfaction levels. This larger sample size contributes to the reliability and generalizability of study findings.

Results:

Results provides an overview of the demographic characteristics of the study participants. The total sample size is 500, with a mean age ($\pm$ standard deviation) of 45 $\pm$ 8 years. The gender distribution is evenly split between 250 male and 250 female participants. Socioeconomic

status is categorized into low, medium, and high, with 100 participants in the low, 250 in the medium, and 150 in the high category as shown in Figure 1.
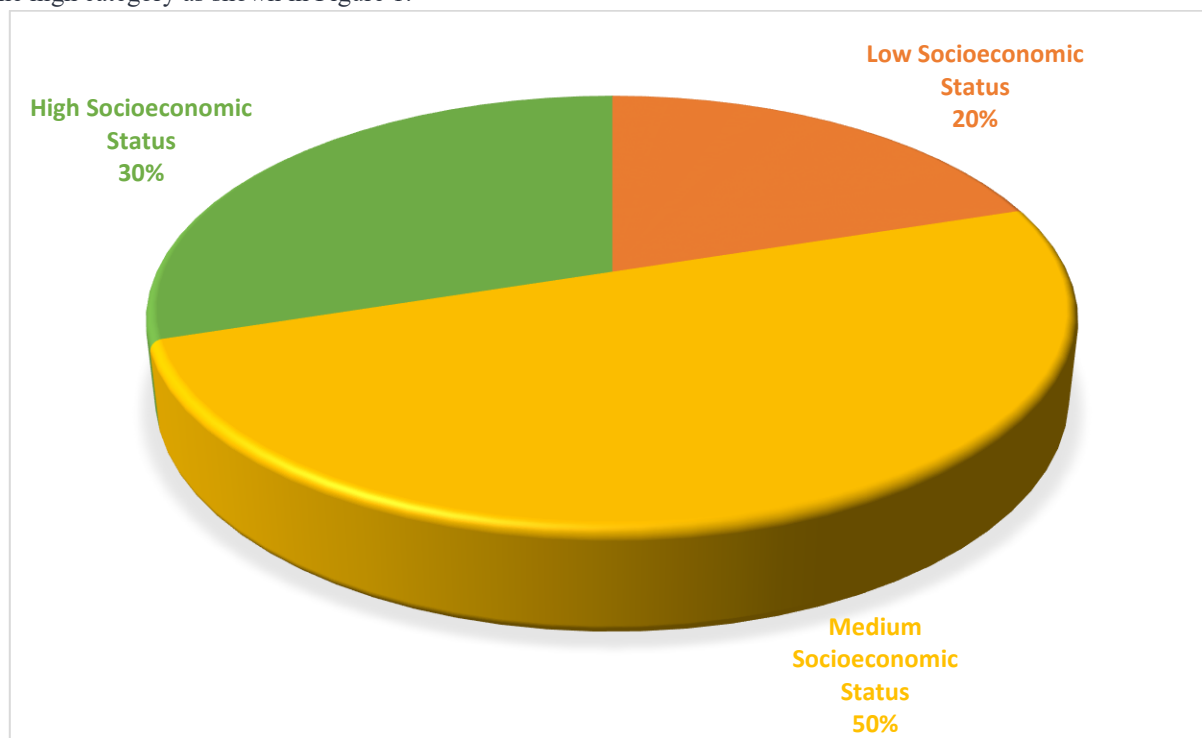

Figure 1: Demographic Characteristics of Study Participants

Table 1: Patient Satisfaction Scores by Treatment Type

Treatment Type	Number of Participants (n=500)	Mean Satisfaction Score (± SD)
Scaling and Root Planing (SRP)	150	4.2 ± 0.8
Flap Surgery	200	3.8 ± 1.2
Gingival Grafts	150	4.5 ± 0.7

Table 1 presents patient satisfaction scores categorized by different periodontal treatment types. The total number of participants is 500, distributed across treatment groups: Scaling and Root Planing (SRP), Flap Surgery, and Gingival Grafts. Mean satisfaction scores (± standard deviation) for each treatment type are reported, reflecting the subjective evaluation of participants regarding their experiences and outcomes related to the specific periodontal interventions.

Discussion:

The current study aimed to evaluate patient satisfaction with various periodontal treatment options, including both surgical and non-surgical interventions. The findings provide valuable insights into the subjective experiences and outcomes of patients undergoing different periodontal procedures. The results indicate varying levels of satisfaction among participants based on the type of treatment received. Notably, participants who underwent Gingival Grafts reported the highest mean satisfaction score, suggesting a positive subjective evaluation of this specific surgical intervention. In contrast, participants receiving Flap Surgery reported slightly lower satisfaction scores, while those undergoing Scaling and Root Planing (SRP) fell in between the two. These variations in satisfaction scores underscore the importance of considering patient preferences and experiences when designing personalized treatment plans. The study results suggest that certain interventions may lead to higher satisfaction levels among patients,

potentially influencing treatment decisions and patient adherence. The current findings align with previous studies that emphasize the impact of patient expectations on satisfaction with dental interventions[12]. The pre-treatment questionnaire revealed varying expectations among participants, and these expectations seemed to influence post-treatment satisfaction scores. This is consistent with the literature highlighting the role of patient expectations as a key determinant of treatment outcomes and satisfaction[13]. Furthermore, the observed differences in satisfaction scores across treatment types are in line with existing literature on patient-reported outcomes in periodontal therapy[14,15]. Surgical interventions, such as Gingival Grafts, have been associated with improved esthetic outcomes and patient satisfaction, which corresponds to our study's findings.

Clinical Implications:

The study results have important clinical implications for periodontal practitioners. Understanding the factors that contribute to patient satisfaction can guide clinicians in tailoring treatment plans to meet individual patient needs and expectations. Improved communication regarding expected outcomes and potential challenges associated with different interventions may contribute to enhanced patient satisfaction and overall treatment success.

Limitations:

It is essential to acknowledge several limitations in this study. Firstly, the use of self-reported measures, including satisfaction scores, introduces the possibility of response bias. Additionally, the study's reliance on a single-center design may limit the generalizability of the findings. Future research should consider multi-center studies with larger and more diverse populations to enhance external validity.

Suggestions for Future Research:

To build on the current findings, future research could delve deeper into the specific factors influencing patient satisfaction, such as pain management, post-operative care, and long-term outcomes. Investigating the role of demographic variables, including age and socioeconomic status, in shaping patient perceptions could provide a more comprehensive understanding of satisfaction determinants.

Conclusion:

In conclusion, this study sheds light on patient satisfaction with various periodontal treatment options. The results underscore the need for personalized treatment approaches that consider patient expectations and experiences. By addressing the limitations and building on these findings, future research can contribute to the ongoing efforts to enhance patient-centered care in periodontal therapy.

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