ORIGINAL RESEARCH PAPER
Volume - 12 | Issue - 07 | July - 2023 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

# PERCEPTION REGARDING FACTORS RELATED TO PERIODONTAL THERAPY AMONG GENERAL DENTAL PRACTITIONERS OF GUJARAT STATE- A QUESTIONNAIRE SURVEY

**Periodontology**

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## ABSTRACT

**Purpose:** To assess the perception regarding periodontists and periodontal therapy among general dental practitioners (GDPs) of Gujarat state. **Materials and Methods:** A questionnaire study was conducted among GDPs of Gujarat state comprising 11 closed-ended questions. The questions addressed the following variables: demographics of the dentist, service as GDP, periodontal services provided by the GDP and periodontal services referred to the periodontists. **Results:** Total 214 GDPs responded to the survey. 96.7% had specialists visit their practice or were sending their patients to specialists; out of which, Oral Surgery (82.6%) and Orthodontics (83.6%) were the most demanding specialties by GDPs, followed by Periodontics (55.1%). The procedures performed by the GDPs were as follows: scaling (97.7%), scaling and root planing (83.2%), gingivectomy (45.3%), flap surgery (17.3%), frenectomy (29%), vestibuloplasty (15%), crown lengthening (55.6%), root coverage procedures (4.2%), bone grafts (12.6%) and implants (39.7%). The procedures for which most GDPs preferred the service of periodontists include bone grafts (84.6%), flap surgery (86.9%), root coverage procedures (82.7%) and others. Gingival recession (57.9%) is the most encountered difficult-to-treat pathology even after using a periodontist's service. 80.4% provided implant care in their clinic, out of which only 49.2% felt the role of periodontists was suitable for the implant care. **Conclusion:** A variety of periodontal services were offered by GDPs. The most common services were non-surgical in nature. GDPs refer most commonly for surgical procedures such as flap surgery, bone grafts, root coverage procedures and others.

## KEYWORDS

General dental practitioners (GDPs), periodontists, questionnaire survey

## INTRODUCTION:

India is the world's second most populous country with over 1.21 billion inhabitants (Census of India, 2011). Periodontal diseases are one of the most prevalent oral diseases, affecting more than 51% of the Indian community (Janakiram C et al, 2020); for every 10,000 patients there is only one dentist available and this ratio is strikingly disproportionate (Ahuja et al, 2011). Even more alarming is that there are only 3000 periodontists currently in India (official website of the Indian Society of Periodontology). Thus, the only immediate solution to this low periodontist to population ratio is to utilise the services of periodontists more efficiently. The combined efforts of periodontists and general dental practitioners (GDPs) are therefore needed to provide efficient periodontal services. To accomplish this task, an understanding of the perception and awareness of dental practitioners regarding periodontists and periodontal therapy is required.

Zemanovich et al (2006) evaluated the demographic variables affecting patient referrals from general dental practitioners to a periodontist. They concluded that various factors such as gender of the dentist and the proximity to a periodontist affected the number of referrals by a general dentist. Treatment of chronic periodontal disease was the most common periodontal procedure that was referred, followed by soft tissue grafting procedures and implants. A comprehensive demographic study concluded that GDPs have good knowledge and attitude towards periodontal treatment procedures largely due to focus on them gaining sufficient theoretical knowledge whereas, their practice towards is still truncated. (James, N. mol et al, 2020).

Sathyamurthy et al (2017) stated that a variety of periodontal services were offered by GDPs. The most common services were non-surgical in nature. General practitioners most commonly refer for surgical therapy of pocket reduction, soft tissue grafting, implant placement, surgical crown lengthening and bone or guided tissue regeneration. Moreover, the knowledge on diagnosis and treatment planning among dentists' is still truncated, and hence, the overall perception of the general dentists toward periodontal treatment in India needs to be gauged so that the general dentists can call for introspection and betterment of their services.

The aim of this study was to assess the perception regarding factors related to periodontal therapy among the general dental practitioners of the state of Gujarat, India. This study also aimed to shed light on measures that can be taken to improve the co-ordination between general dental practitioners and periodontists in the interest of the general public.

## MATERIALS AND METHODS:

This was a questionnaire survey conducted in the state of Gujarat, India. An online structured questionnaire had been made using https://docs.google.com/forms, accessing the perception regarding factors related to periodontal therapy among the GDPs. The questionnaire was structured explaining the introduction, participation information and consent sheet followed by demographic details and questions related to knowledge, attitude and practice (total 11 questions).

### Data Collection

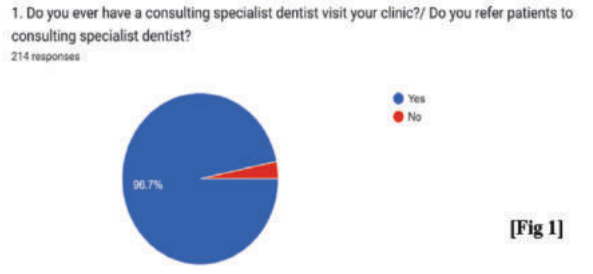
The online questionnaire was distributed through social media, responses were collected for a period of 3 months and the collected data were then subjected to statistical analysis.

### Statistical Analysis

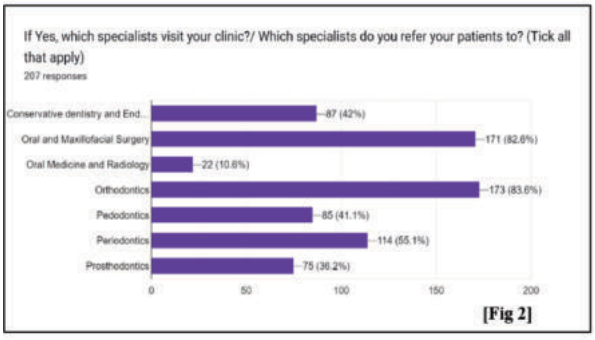
The data were entered into an Excel spreadsheet and analysed. Descriptive analysis was undertaken to present an overview of the findings from this sample.

**RESULTS:**

Total 214 GDPs completed questionnaires. The questions on demographic characteristics of the responding dentists yielded the following: the average age of the respondents was 27 years with a range from 23 to 48; the greatest percentage of respondents were in practice 5 to 10 years. 96.7% of general dental practitioners had consulting specialists visit their practice/ refer their patients to a specialist (Fig 1), 55.1% of which had a consulting Periodontist, along with 82.6% Oral Surgeons and 83.6% Orthodontists (Fig 2). 76.2% of GDPs felt periodontists were easily accessible (Fig 3). The procedures performed by the GDPs and the procedures for which general dental practitioners preferred the service of periodontists are shown in Fig 4 & Fig 5. Fig 6 depicts the percentage of failures seen even after a periodontist performed the treatment. 80.4% of the GDPs provided implant care in their practices (Fig 7). Fig 8 & Fig 9 depicts the percentage of responses for the GDPs' choices of different specialists to provide implant care. 56.1% of the GDPs believed that contemporary periodontology fulfils all periodontal needs, where as 43.9% of them feel the opposite and find that further research is warranted in the field of periodontology (Fig 10), especially on bone grafts (41.4%), guided tissue regeneration/stem cells (87.4%) and gingival grafts (36.2%) (Fig 11).




[Fig 1]

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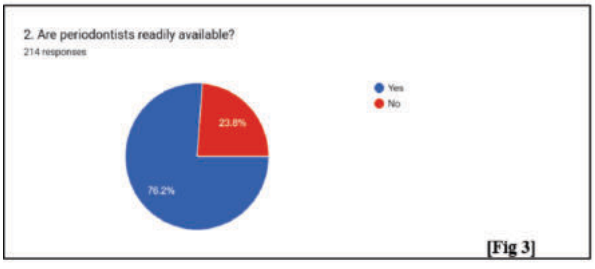


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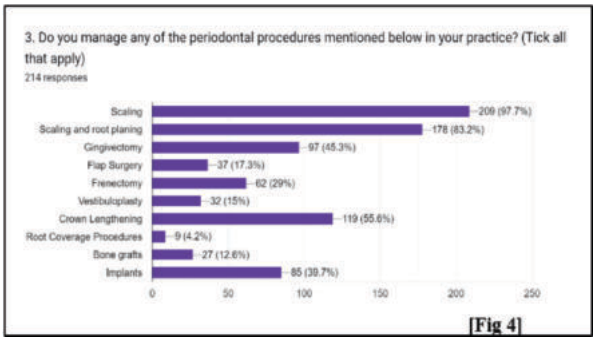


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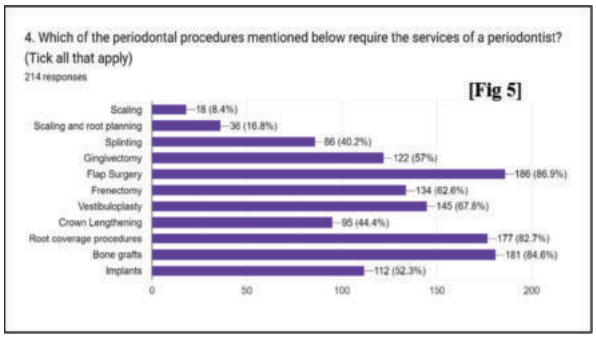
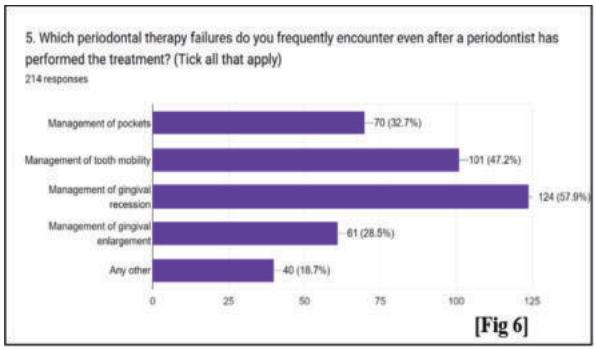



[Fig 5]

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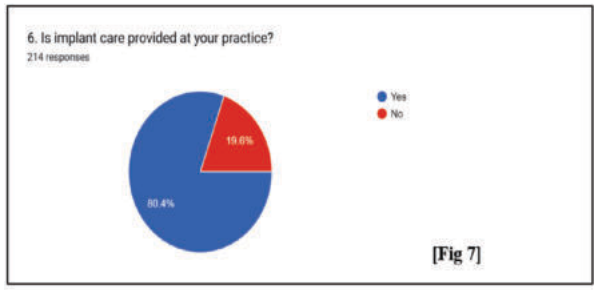
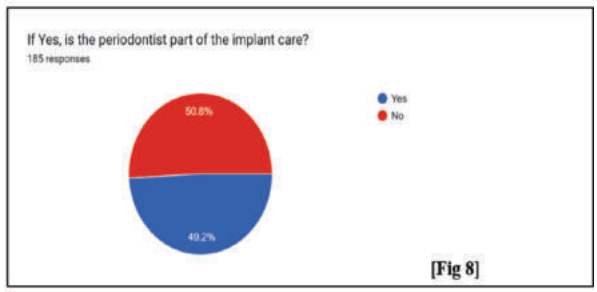



[Fig 7]

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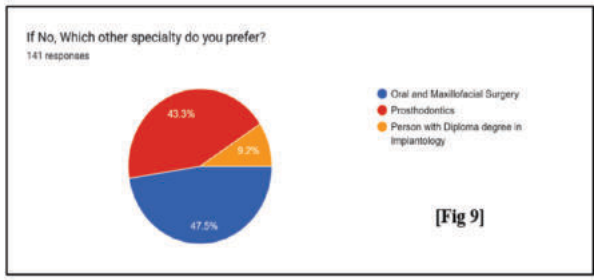


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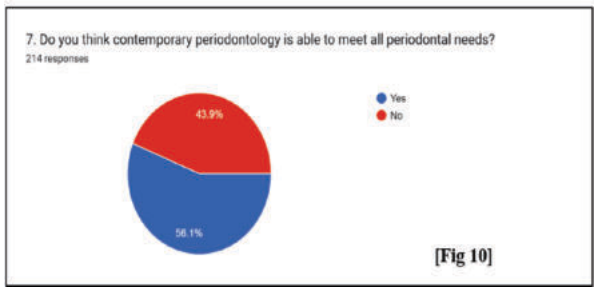
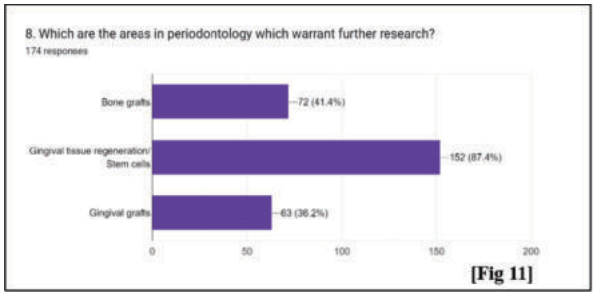



[Fig 10]



[Fig 11]

## DISCUSSION:

The dental literature lacks information about the types of periodontal services rendered by general dental practitioners (Sathyamurthy et al, 2017). Thus, this study was designed to collect information about the types of periodontal services performed by the GDPs practicing in Gujarat state.

96.7% of GDPs had consulting specialists visit their clinic, of which 55.1% had consulting periodontists. A study by Zemanovich et al (2006) conducted in the state of Virginia, USA, found that nearly all (97.8%) of the responding dentists did refer to periodontists. The results obtained were as follows for almost all the GDPs: 100% managed scaling completely by themselves and a few of them even managed minor surgical procedures such as gingivectomy (47%) and frenectomy (33%) etc. Similar results were found in a study by Mali et al (2008) in Pune, India; 98% of the GDPs performed phase I therapy on their own and all of them carried out scaling. 61% of the GDPs in Belgaum perform splinting, in contrast to the results of Mali et al (2008) in Pune, where two-thirds of the dentists did not.

The top five procedures for which GDPs preferred the service of a periodontist are flap surgery (86.9%), bone grafts (84.6%), root coverage procedures (82.7%), vestibuloplasty (67.8%) and frenectomy (62.6%). The findings here are similar to those reported in another study involving GDPs practicing within Saudi Arabia (Alblowi et al, 2019). 97.7% GDPs rendered non-surgical procedures by themselves. This reflects the ignorance of Gujarat's GDPs that a great deal of expertise is in fact required for subgingival scaling. In contrast, 62%–87% of them feel they need the service of periodontists in performing bone grafts, flap surgeries and other surgical procedures. However, 17%–45% of the GDPs manage surgeries independently. Similar results were found in a study by Mali et al (2008), where 38% of the dentists carried out some periodontal surgical procedures on their own. Gingivectomy was the most common procedure performed by general dentists, followed by flap surgery, crown lengthening and ridge augmentation (Mali et al, 2008). It is our responsibility as periodontists to educate general dental practitioners on how we can make their practice stronger and better equipped to manage patients' periodontal needs.

However, 28%–58% of GDPs noticed there are failures in managing periodontal pockets, tooth mobility, gingival recession and gingival enlargement even after making use of the service of a periodontist. The reasons behind this could be multifactorial, including patient factors and other causes. Along the same lines, Mali et al (2008) observed that a similar percentage – 54% –of the dentists reported that there is only an occasional reduction in tooth mobility following periodontal treatment.

In the last couple of decades, there have been tremendous improvements and advances in providing the most effective methods to replace missing teeth by dental implants. The result obtained from this study shows that 80.4% of GDPs provide implant care in their practices in Gujarat. Even today, many GDPs do not believe that implants are an integral element of a periodontist's armamentarium; they feel that periodontists should only be asked for help in treatment planning and post placement maintenance (Mali et al, 2008). 43.9% of the GDPs feel contemporary periodontology is not able to meet all periodontal needs and thus that further research and advanced training is warranted, especially in the field of bone grafts, soft tissue augmentation, etc.

One limitation of our study is that we did not include questions about supportive periodontal therapy. The reasons for this are twofold. First, the primary purpose of our study was to find out whether periodontal treatment was rendered by the periodontists, if GDPs consult periodontists for the same or instead perform the various periodontal therapies by themselves. Second, we know that supportive periodontal therapy is the central element of periodontal care. To take it a step further, supportive periodontal treatment should be elaborated upon in a future study with a separate questionnaire survey designed to include this aspect.

## CONCLUSION:

A variety of periodontal services were offered by GDPs, the most common being non-surgical in nature. GDPs refer most commonly for surgical procedures such as flap surgery, bone grafts, root coverage procedures, vestibuloplasty and frenectomy. These results support those of other researchers who found that periodontal referral processes need to be reassessed to ensure that patients receive the best periodontal treatment available. Substantial percentages of general dentists either do not refer any patients or only very few for periodontal treatment. Therefore, GDPs practicing in Gujarat should be encouraged to assess more patients in the view of periodontal aspects. It should be made mandatory that the periodontal status of all new patients is recorded as part of their routine oral examinations. Furthermore, a thorough evaluation of periodontal referral patterns is needed to improve patient outcomes.

**Acknowledgements:**
The authors are grateful to all participants of the study.

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