

# Perception of General Dental Procedure Performed by Orthodontist in Practice: A Survey

Dr. Neeraj Agarwal

Ex Professor, Rama Dental College, Kanpur, Uttar Pradesh, 208017 India  
Address : 1/117 Ambedkarapuram A.V. 3 Kalyanpur Kanpur

**Abstract:** To compare attitude of periodontist, Endodontist, prosthodontist, Oral Surgeon and General Dentist regarding the general dental procedure done by Orthodontist during the course of orthodontic treatment. An analogue survey was developed to evaluate and compare the current opinion of a representative sample (n=150) of periodontist, Endodontist, prosthodontist, Oral Surgeon and General Dentist regarding the General dental procedure performed by orthodontist. The general dental procedure performed by orthodontist during the course of treatment, majority(80%) of periodontist, endodontist, prosthodontist, oral surgeon and general dental surgeon felt as appropriate. 65% of total sample believed that referral would not be affected by performing general dental procedure by orthodontist. Orthodontist must communicate with other clinician that procedure performed during the orthodontic treatment by him is at the accepted standard of care.

**Keywords:** Periodontist, endodontist, prosthodontist, oral surgeon, general dental procedure

## 1. Introduction

The vast majority of orthodontic practice have seen a dramatic decline in new patient referral from dentist in the past few years. Today more than ever practices need strategy to replace the lost new patient flow, optimise production efficiency and maintain a loyal patient referral base. Once upon a time orthodontist would do their thing, General dentist would do their and endodontist, periodontist, prosthodontist and oral surgeon would do their own thing Joondaph recalls. Today mandates for interdisciplinary communication and treatment planning represent the biggest change in the orthodontic today. The team approach in which all members of the dental team work together to treat patient in anticipation of what is ahead whether it is restorative dentistry, bonding or whitening Joondaph says. Orthodontist today are working with general dentist and other dental speciality to plug orthodontics into the overall care and treatment of the individuals, Joondaph observes as a result we can produce much better results.

In order for their practice to grow and survive orthodontist much attract new patient various strategies are being used including external and internal marketing, referral from dentist and other speciality dental surgeon. Studies have found that dentist are perhaps the most important means of referring new patient to an Orthodontist<sup>2,5</sup>. Factors such as communications, orthodontist treatment and philosophy, the finished dentition, patient care, oral hygiene protocol of orthodontist, professional are personal relationship and orthodontist office have been shown to be influential in referral process. Dentist expect the orthodontist to refer the patient back for periodic recall appointment.<sup>3</sup> The purpose of this study was to investigate the perceptions of periodontist, Endodontist, prosthodontist, Oral Surgeon and General Dentist towards the procedure performed by orthodontist during the course of orthodontist treatment.

## 2. Material and Method

This study performed in private practice after taking consent of periodontist, Endodontist, prosthodontist, Oral Surgeon and General Dentist.

## 3. Sample Selection

150 actively practising clinician including 60 female and 90 male, age ranges 22-65 years were selected for the study after taking their consent for the study. Survey was sent to clinician by mail and included an addressed postage paid envelope. Survey was designed to gather information about the attitude of of periodontist, Endodontist, prosthodontist, Oral Surgeon and General Dentist towards the procedure done by orthodontist during the course of orthodontist treatment.

Front page of each survey contained the title of the study and explain its purpose. At the beginning of the survey respondents were asked whether they were of periodontist, Endodontist, prosthodontist, Oral Surgeon or General Dentist in order to allow group comparison of the result. The first section of the survey gathered demographic information such as gender, age and calendar year of graduation.

The second section included 9 questions on how appropriate respondent felt it was for an orthodontist to perform various general dental procedure. The respondents were asked to give 1-10 number of score, the higher the score more appropriate the respondent felt the procedure was. Subject were asked how they thought the procedure produced by Orthodontist would effect referral. A section allowing additional was also included at the end of the survey.

### Statistical Analysis

Data was entered into a excel spreadsheet and all the grouped were compared using chi-square test or analysis of variance as indicated by outcome variable with significant set at  $p < 0.05$ .

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#### 4. Result

A total of 150 survey were returned, 40% of respondents were General dentist, 20% periodontist, 18% prosthodontist, 12% endodontist and 10% oral surgeon. Demographic characteristics of respondents are described in table 2. Overall there was a greater proportion of male respondents.

##### Perceived Appropriateness of procedure Produced by Orthodontist

80% of the total sample felt that it was appropriate for an orthodontist to perform general dental procedure during course of treatment.

On an individual basis 92% prosthodontist, 90% of endodontist, 78% oral surgeon, 66% of periodontist and 52% of general dentist regarded that general dental; procedure performed by orthodontist as appropriate. A higher mean VAS score indicate that the procedure done by orthodontist was appropriate. Fabrication of functional space maintainer was given higher mean VAS score by all groups of clinician. The second higher was score recorded by all groups was for uncovering of TAD.

##### Perceived Effect on Referral to Orthodontist

65% of total sample believe that there would be no effect on referral, while rest of the 35% split between 25% decrease and 10% increase in referral. Similarly on an individual group basis majority of clinician thought that referral would not be effected. Similar number that Is 11% of prosthodontist felt that referral would increase or decrease as a result of procedure performed by orthodontist. More number of endodontist felt increase in referrals rather than a decrease in referrals (12%-9%). Conversely significantly more periodontist, oral surgeon and general dentist perceived an decrease in referrals rather than increase.

#### 5. Discussion

It was not surprising that a large majority of survey respondent were male. The majority of dental practitioner are male and were more likely to respond to the survey. Gender had no effect among all groups surveyed in this study. This finding was similar to that of a study completed by Del Aguila et al<sup>11</sup>.

General dental procedure done by orthodontist was considered appropriate by majority of (80%) clinician. However periodontist and general dentist approval was significantly less than that of endodontist, prosthodontist and oral surgeon. Periodontist and general dentist generate revenue by performing surgical and non-surgical procedures aimed at improving the health and aesthetic of oral soft tissue. It could have been that the lower rate of approval by periodontist and general dentist was a result of economic implication associated with orthodontist performing such procedures. Some periodontist and oral surgeon may have felt that the general dental procedure should be limited to specialist trained in their use and better aware of possible clinical and biological consequences.

The highest mean VAS score allocated by all group of clinician was for uncovering of TAD(table 3) and Functional

Space Maintainer. This finding was not surprising since these procedures are now commonly placed by orthodontist and their maintenance and follow up may be regarded as the responsibility of orthodontist.

Over 65% of all practitioner surveyed believed that the procedure performed by orthodontist would not affect referral to the orthodontist practise. However there were differences among groups (figure 1). More periodontist and general dental surgeon felt that procedure done by orthodontist would decrease rather than increase referrals to the practise. This may have been because periodontist and general dental surgeon would be less likely to refer to an orthodontist who was performing the general dental procedure.

Since the present study has been based on the self reported and subjective perception of clinician, the results are dependent on how sincerely and truthfully the clinician answered the survey question. This is the limitation of the present study conducted and could be improved in further study.

#### 6. Conclusion

- Majority of (80%) periodontist, endodontist, Prosthodontist oral surgeon and general dentist regarded the general dental procedure done by orthodontist as appropriate.
- Over 65% of total sample believed that patient referral would not be affected by the general dental procedure performed by orthodontist.
- Orthodontist must communicate with the various other speciality clinician that the general dental procedure performed by him is at the accepted level of standard.
- Orthodontist must do something(to compensate the revenue) to gain more referrals from periodontist and general dental surgeon.

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### Author Profile

**Dr. Neeraj Agarwal** received B.D.S in dentistry in 1991 & M.D.S orthodontics in 1994 from King George Medical College Lucknow . He worked as a professor and PG guide in Rama Dental College Kanpur during 2005-2012 .Currently working as a professor on adhoc basis in GMC Kannauj and also in private practice.

**Table 1**

#### Survey

- 1) Gender - a.) Male b.) Female
- 2) Age
- 3) Are you an Orthodontist? Yes No  
If no what is your speciality
- 4) Year of graduation from speciality programme
- 5) Do you feel it is appropriate for general dental procedure to be done by orthodontist
- 6) Please give number out of 10 to indicate how appropriate you feel for an orthodontist to perform following procedure.
  - a) Gingivectomy to improve/facilitate hygiene around brackets/bands.
  - b) Gingivectomy to enhance esthetics by improving gingival symmetry or tooth size proportions.
  - c) Operculectomy
  - d) Removal of keratinized gingiva to expose unerrupted teeth
  - e) Frenectomy
  - f) Extraction of teeth
  - g) Restoration of carious tooth
  - h) Fabrication of crown
  - i) Fabrication of functional space maintainer
  - j) Ablation of aphthous ulcer's
  - k) Uncovering of TAD due of overgrowth of mobile mucosa
- 7) Procedure performed by orthodontist
  - a) Increases referral to orthodontist practice
  - b) Decreases referral to orthodontist practice
  - c) Has no effect to orthopractice.

**Table 2:** Demographics of surveyed respondents

|                           | <u>Periodontist</u> | <u>Prosthodontist</u> | <u>Endodontist</u> | <u>Oral Surgeon</u> | <u>General Dentist</u> |
|---------------------------|---------------------|-----------------------|--------------------|---------------------|------------------------|
| <u>Gender</u>             |                     |                       |                    |                     |                        |
| <u>Male:Female</u>        | <u>20:10</u>        | <u>15:12</u>          | <u>12:6</u>        | <u>7:8</u>          | <u>40:20</u>           |
| <u>% No</u>               | <u>20%</u>          | <u>18%</u>            | <u>12%</u>         | <u>10%</u>          | <u>40%</u>             |
| <u>Age</u>                |                     |                       |                    |                     |                        |
| <u>Mean</u>               | <u>42.5</u>         | <u>44.5</u>           | <u>44.5</u>        | <u>44</u>           | <u>43.5</u>            |
| <u>Range</u>              | <u>25-60</u>        | <u>28-61</u>          | <u>27-62</u>       | <u>30-58</u>        | <u>22-65</u>           |
| <u>Year of graduation</u> |                     |                       |                    |                     |                        |
| <u>Mean</u>               | <u>2006</u>         | <u>1998</u>           | <u>2004</u>        | <u>2000</u>         | <u>1999</u>            |
| <u>Range</u>              | <u>2000-2012</u>    | <u>1988-2008</u>      | <u>1996-2012</u>   | <u>1990-2010</u>    | <u>1986-2012</u>       |

**Table 3:** Perceived appropriateness of procedure performed by orthodontist

|  | <u>Periodontist</u><br><u>Mean VAS</u><br><u>(95% CI)</u> | <u>Endodontist</u><br><u>Mean VAS</u><br><u>(95% CI)</u> | <u>Prosthodontist</u><br><u>Mean VAS</u><br><u>(95% CI)</u> | <u>Oral surgeon</u><br><u>Mean VAS</u><br><u>(95% CI)</u> | <u>General dentist</u><br><u>Mean VAS</u><br><u>(95% CI)</u> |
|--|---|--|---|---|--|
| Gingivectomy to improve/facilitate hygiene around brackets/bands                           | <u>51.6</u>   | <u>75.4</u>  | <u>85.6</u>   | <u>78.3</u>   | <u>67</u>  |
| Gingivectomy to enhance esthetics by improving gingival symmetry or tooth size proportions | <u>48.6</u>   | <u>71.6</u>  | <u>82.4</u>   | <u>66.3</u>   | <u>60.3</u>  |
| Operculectomy  | <u>52.4</u>   | <u>76.8</u>  | <u>84.1</u>   | <u>65.8</u>   | <u>62.5</u>  |
| Removal of keratinized gingiva to expose   | <u>70.6</u>   | <u>78.0</u>  | <u>80.1</u>   | <u>66.8</u>   | <u>80.2</u>  |

|  |             |             |             |             |             |
|--|-------------|-------------|-------------|-------------|-------------|
| unerrupted teeth                                     |             |             |             |             |             |
| Frenectomy   | <u>42.6</u> | <u>75.2</u> | <u>78.4</u> | <u>72.6</u> | <u>76.4</u> |
| Extraction of teeth                                  | <u>68.8</u> | <u>73.1</u> | <u>75.6</u> | <u>65.4</u> | <u>72.8</u> |
| Restoration of carious tooth                         | <u>72.4</u> | <u>68.6</u> | <u>70.4</u> | <u>80.6</u> | <u>65.3</u> |
| Fabrication of crown                                 | <u>69.8</u> | <u>72.8</u> | <u>76.2</u> | <u>82.2</u> | <u>70.6</u> |
| Fabrication of functional space maintainer           | <u>80.2</u> | <u>84.2</u> | <u>96.8</u> | <u>86.4</u> | <u>90.0</u> |
| Ablation of aphthous ulcer's                         | <u>48.1</u> | <u>52.6</u> | <u>58.8</u> | <u>52.0</u> | <u>54.6</u> |
| Uncovering of TAD due of overgrowth of mobile mucosa | <u>65.8</u> | <u>82.6</u> | <u>90.6</u> | <u>78.0</u> | <u>78.2</u> |

Perceived Effect on referrals to orthodontist

