

# Influence of Digital Advertising on Clear Aligner Awareness and Treatment Decision-Making: A Comparative Study of General Dental Practitioners and the Public

Dr. C R Aashik<sup>1</sup>, Dr. Dilip S<sup>2</sup>, Dr. Rasiga Gandhi<sup>3</sup>, Dr. K Ravi<sup>4</sup>

Authors:

1. Postgraduate student, Department of Orthodontics, SRM Dental College, Bharathi Salai, Ramapuram.
2. Professor, Department of Orthodontics, SRM Dental College, Bharathi Salai, Ramapuram.
3. Senior lecturer, Department of Orthodontics, SRM Dental College, Bharathi Salai, Ramapuram.
4. HOD and Professor, Department of Orthodontics, SRM Dental College, Bharathi Salai, Ramapuram.

## Corresponding author:

Dr. C R Aashik, Postgraduate student, Department of Orthodontics, SRM Dental College, Bharathi Salai, Ramapuram.

Email- aashikcola@gmail.com

## ABSTRACT

**Objective:** To assess and compare the influence of advertising on clear aligner awareness and treatment-related decision-making among general dental practitioners (GDPs) and members of the public.

**Materials and Methods:** This cross-sectional questionnaire-based study included 350 participants, comprising 175 GDPs and 175 members of the public seeking clear aligner therapy. Two structured questionnaires, developed from the existing literature and reviewed for content validity by an expert panel, were administered. Seven common questions allowed direct comparison between the groups. Data were analysed using descriptive statistics and the chi-square test, with statistical significance set at  $P < 0.05$ .

**Results:** Aesthetics was the most commonly reported reason for clear aligner treatment among GDPs (161, 92.0%), while advertisements were identified as the main source of patient awareness (161, 92.0%). Social media was the predominant advertising platform reported by GDPs (162, 92.6%) and the public (121, 69.1%). Among the public, aesthetics was the most frequent treatment motivation (84, 48.0%), whereas self-interest was the leading factor influencing treatment decisions (55, 31.4%). Most participants from the public group were uncertain whether clear aligners could treat all malocclusions (113, 64.7%). Significant differences were observed between GDPs and the public across all common questionnaire items ( $P < 0.001$ ). GDPs were substantially more likely than the public to perceive advertising as an influence on treatment seeking (92.0% vs. 24.6%;  $\chi^2 = 164.346$ ,  $P < 0.001$ ).

**Conclusion:** Social media and digital advertising play an important role in clear aligner awareness. However, differences between professional and public perceptions highlight the need for accurate, evidence-based, and ethically responsible digital communication alongside professional consultation.

## Keywords

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## INTRODUCTION

The demand for aesthetic orthodontic treatment has increased, with clear aligners becoming an increasingly prominent treatment option. Advances in

materials and technology have improved their aesthetics and patient acceptance, contributing to their growing use in contemporary orthodontic practice.<sup>1</sup> Clear aligner therapy, however, is not universally applicable; treatment success depends substantially on appropriate case selection and clinician experience. Differences in training, experience, and treatment planning between orthodontists and general dental practitioners (GDPs) have also been reported.<sup>1,2</sup>

The expansion of clear aligner therapy has occurred alongside a broader transformation in orthodontic marketing. Orthodontic practices increasingly use websites, social media, and Internet-based advertising to communicate with prospective patients.<sup>3,4</sup> These platforms have become important sources of treatment information and may influence how patients search for, evaluate, and select orthodontic services. In a qualitative study of young adults seeking orthodontic treatment, social media was regarded as a convenient source of information, while promotional content influenced interest in specific products, including clear aligners.<sup>5</sup>

The influence of digital advertising is not limited to patients. Contemporary orthodontic marketing increasingly involves communication with both healthcare consumers and dental professionals, potentially shaping awareness and perceptions of treatment modalities.<sup>3,4</sup> However, the rapid expansion of promotional content has raised concerns regarding the quality and evidentiary basis of information presented to the public. Studies evaluating orthodontic advertising have reported deficiencies in the scientific support of promotional claims, highlighting the importance of accurate and responsible communication in orthodontic marketing.<sup>6</sup>

This issue is particularly relevant to clear aligner therapy, where commercial promotion may precede professional consultation. Although advertisements can increase treatment awareness, exposure to promotional information does not necessarily equate to an adequate understanding of treatment indications, limitations, or clinical requirements. Furthermore, GDPs increasingly encounter patients who may have formed expectations about clear aligner therapy before consultation, while differences between GDPs and orthodontists in their approach to clear aligner treatment have already been demonstrated.<sup>2</sup>

Despite growing literature on orthodontic marketing and social media, the comparative influence of advertisements on clear aligner awareness and treatment-related decision-making among dental

professionals and the public remains insufficiently explored. Therefore, this study aimed to evaluate and compare the influence of advertisements on clear aligner awareness and decision-making among general dental practitioners and members of the public.

## **MATERIALS AND METHODS**

### **Study design and participants**

A cross-sectional questionnaire-based study was conducted to compare the influence of advertisements on clear aligner awareness and treatment-related decision-making among two study groups: Group I, comprising general dental practitioners (GDPs), and Group II, comprising members of the public seeking clear aligner therapy. General dental practitioners with a minimum qualification of Bachelor of Dental Surgery (BDS) were included in Group I, while individuals interested in undergoing clear aligner therapy were included in Group II. Participants with incomplete questionnaire responses were excluded from the study and electronic informed consent was obtained from all participants before survey administration.

### **Sample size calculation**

The sample size was estimated using G\*Power software (Version 3.1, Heinrich Heine University, Düsseldorf, Germany). The calculation was based on the study by Edwards et al.,<sup>7</sup> which evaluated the effects of media advertising on consumer perception of orthodontic treatment quality. A minimum sample size of 248 participants (124 per group) was required at a 95% confidence level with 80% study power. To compensate for incomplete responses and improve the precision of the study, 350 participants were included, comprising 175 general dental practitioners and 175 members of the public seeking clear aligner therapy.

### **Questionnaire development and data collection**

Two structured questionnaires were developed based on the available literature related to orthodontic advertising, digital marketing, and clear aligner therapy. The questionnaires were evaluated for content validity by an expert panel from the institution and modified according to their recommendations before finalization. The GDP questionnaire consisted of 22 questions and 1 sub question, whereas the public questionnaire consisted of 17 questions. Seven questions were common to both questionnaires to

facilitate direct comparison between the two study groups.

The questionnaires were administered electronically using Google Forms and distributed through online platforms. Participation was voluntary, and responses were collected anonymously. Participants initially identified themselves as either a general dental practitioner or a member of the public, following which they were directed to the corresponding questionnaire.

### Statistical analysis

The collected data were entered into Microsoft Excel and analyzed using SPSS software (Version 29, IBM Corp., Armonk, NY, USA). Descriptive statistics were expressed as frequencies and percentages. Comparisons between the two study groups were performed using the Chi-square test. A P-value < 0.05 was considered statistically significant.

## RESULTS

A total of 350 participants, comprising 175 general dental practitioners (GDPs) and 175 members of the public, completed the questionnaire. The responses of both groups were analysed separately, and the common questionnaire items were compared using the Chi-square test. The detailed distribution of responses is presented in Tables 1–3.

Among GDPs, aesthetics was the most frequently reported reason for selecting clear aligner therapy (161, 92.0%), followed by reduced pain (7, 4.0%), easier oral hygiene (4, 2.3%), and shorter treatment duration (3, 1.7%). Most respondents reported that patients seeking clear aligner therapy were 18–25 years of age (156, 89.1%), with students (91, 52.0%) and full-time employed individuals (83, 47.4%) constituting the predominant patient groups. Female patients (87, 49.7%) or both genders equally (84, 48.0%) were reported to seek clear aligner therapy more frequently. Advertisements were identified as the principal source through which patients became aware of clear aligner therapy (161, 92.0%).

Most GDPs practiced in university or institutional settings (101, 57.8%), followed by private practice (69, 39.4%). Academic seminars and textbooks were the primary source of knowledge regarding clear aligner therapy (105, 60.0%), followed by postgraduate training (35, 20.0%). Although 77 (44.0%) respondents had never advised clear aligner

therapy, 95 (54.3%) were currently using clear aligners in practice. Among clinicians providing aligner treatment, 170 (97.1%) had treated 0–10 cases during the preceding year, and clear aligners accounted for less than 25% of the overall clinical workload in 136 (77.7%) respondents. Follow-up appointments were scheduled every 1–2 weeks by 36 (20.6%) respondents and every 3–4 weeks by 35 (20.0%), while 77 (44.0%) had not managed a clear aligner case.

Spacing was the most frequently treated malocclusion (146, 83.4%), followed by deep bite (28, 16.0%). The inability to treat complex malocclusions was the most frequently reported limitation of clear aligner therapy (107, 61.1%), followed by treatment cost (46, 26.3%) and limited root movement (17, 9.7%). Clear aligners were not recommended for patients with abnormal oral habits by 71 (40.6%) respondents, whereas 63 (36.0%) prescribed them only in selected cases. Social media was the predominant advertising platform (162, 92.6%), and advertisements were considered to influence patients' selection of a dental clinic or aligner brand by 115 (65.7%) respondents. Creating awareness was identified as the primary objective of advertising by 118 (67.4%), and 131 (74.9%) respondents were aware of private agencies involved in dental advertising.

A postgraduate degree was considered the minimum qualification required to prescribe clear aligners by 85 (48.6%) respondents, while 62 (35.4%) preferred an undergraduate degree with fellowship training. Most GDPs estimated the average treatment cost to range between ₹60,000 and ₹1,00,000 (144, 82.3%). Auxiliary attachments were considered necessary in selected aligner cases by 114 (65.1%) respondents. Among GDPs not currently providing clear aligner therapy, higher treatment cost was the most frequently reported reason for underutilization (63, 78.8%), followed by limited orthodontic tooth movement (10, 12.4%) and lack of patient demand (7, 8.8%).

Among the public, aesthetics was the most frequently reported reason for preferring clear aligner therapy (84, 48.0%), followed by easier oral hygiene (43, 24.6%), reduced pain (30, 17.1%), and shorter treatment duration (18, 10.3%). The respondents comprised 91 (52.0%) females and 84 (48.0%) males. The largest age group was 18–25 years (85, 48.6%), followed by individuals older than 35 years (72, 41.1%). Full-time employed individuals (69, 39.4%) and students (60, 34.3%) constituted the majority of participants. Self-interest (55, 31.4%) was the most frequently reported factor influencing the decision to

undergo clear aligner therapy, followed by advertisements (43, 24.6%), professional recommendation (41, 23.4%), and advice from family or friends (36, 20.6%). Social media was the predominant platform through which respondents encountered clear aligner advertisements (121, 69.1%).

Most respondents were uncertain whether clear aligners could treat all malocclusions (113, 64.7%). Convenience combined with lower cost and attractive advertising was the most frequently reported reason for preferring direct-to-consumer aligner companies (73, 41.7%), followed by convenience alone (48, 27.4%). Invisalign was the most frequently recognised aligner brand (91, 52.1%), followed by Toothsi (55, 31.4%). Most respondents estimated the average treatment cost to range between ₹60,000 and ₹1,00,000 (102, 58.3%) and expected treatment duration to be 1–2 years (92, 52.5%).

Regarding treatment-related knowledge, 83 (47.4%) respondents were uncertain about their ability to comply with the recommended 22-hour daily wear protocol, while 68 (38.9%) reported that they would be unable to comply. Awareness of dietary modifications during treatment was reported by 61 (34.9%) respondents, whereas 73 (41.7%) were unaware. Most respondents reported knowing whom to contact in the event of treatment-related problems (97, 55.4%). Uncertainty regarding direct-to-consumer aligner therapy without orthodontic supervision was reported by 92 (52.6%) respondents, while 59 (33.7%) were not confident with such treatment. More than half believed that dental extractions were not required during clear aligner therapy (96, 54.8%). Approximately half perceived a positive association between advertising and treatment quality (88, 50.2%), whereas 54 (30.9%) reported no association and 33 (18.9%) perceived a negative association.

Comparison of the common questionnaire items demonstrated statistically significant differences between GDPs and the public for all evaluated variables ( $P < 0.001$ ). GDPs more frequently identified aesthetics as the primary reason for selecting clear aligner therapy than the public (92.0% vs. 48.0%;  $\chi^2 = 106.509$ ,  $P < 0.001$ ). Significant differences were also observed in the perceived demographic profile of individuals seeking clear aligner therapy, including gender ( $\chi^2 = 156.817$ ,  $P < 0.001$ ), age ( $\chi^2 = 107.972$ ,  $P < 0.001$ ), and occupation ( $\chi^2 = 50.864$ ,  $P < 0.001$ ).

Advertisements were more frequently identified by GDPs as the primary factor influencing patients to

seek clear aligner therapy than by the public (92.0% vs. 24.6%;  $\chi^2 = 164.346$ ,  $P < 0.001$ ). Although both groups identified social media as the predominant advertising platform, its use was reported more frequently by GDPs (92.6%) than by the public (69.1%) ( $\chi^2 = 56.007$ ,  $P < 0.001$ ). Most respondents in both groups estimated the average treatment cost to range between ₹60,000 and ₹1,00,000; however, this response was more frequent among GDPs than the public (82.3% vs. 58.3%;  $\chi^2 = 27.726$ ,  $P < 0.001$ ).

## DISCUSSION

The present study demonstrated that digital advertising, particularly through social media, has become the predominant source of awareness regarding clear aligner therapy among both general dental practitioners and members of the public. This finding reflects the ongoing shift from conventional marketing strategies to digitally driven patient engagement, where social media platforms increasingly serve as the primary interface between clinicians and prospective patients.

This observation is consistent with contemporary orthodontic literature, which recognizes social media, practice websites, and digital marketing as integral components of modern orthodontic communication and patient outreach.<sup>8, 9</sup> Previous studies have consistently reported that digital platforms enhance the visibility of orthodontic services and improve public awareness of clear aligner therapy, highlighting their growing influence on patient engagement and practice marketing.<sup>5, 3, 7</sup>

However, the present study further demonstrates that increased awareness should not be equated with treatment acceptance. Rather, digital advertisements appear to function primarily as an entry point that encourages patients to seek further information and professional consultation. Consequently, online promotional material should provide accurate, balanced, and evidence-based information that supports informed patient engagement while maintaining professional and ethical standards.<sup>10-12</sup>

Although awareness of clear aligner therapy was high among the public, the present study identified an important disparity between treatment expectations and treatment knowledge. While respondents readily recognized clear aligners and commonly advertised brands, uncertainty persisted regarding treatment indications, patient compliance, dietary restrictions, and the potential need for extractions. These findings suggest that digital advertising successfully increases

treatment visibility but provides only a limited understanding of the clinical principles governing clear aligner therapy.

The expanding use of digital marketing has substantially improved public awareness and acceptance of clear aligner therapy, with social media increasingly serving as a readily accessible source of orthodontic information.<sup>8</sup> Previous studies have similarly reported that digital platforms enhance patient engagement while emphasizing that online information should complement, rather than replace, professional consultation.<sup>9, 5</sup> The present findings extend these observations by demonstrating that familiarity with clear aligners does not necessarily correspond to an accurate understanding of treatment complexity.

Consistent with previous reports, aesthetics remained the principal motivation for considering clear aligner therapy; however, patients also valued improved oral hygiene, comfort, and shorter treatment duration, indicating that treatment expectations extend beyond cosmetic improvement alone.<sup>13, 4, 2, 1</sup> Collectively, these findings highlight the need for comprehensive patient education to align treatment expectations with evidence-based clinical information, thereby supporting realistic expectations and informed decision-making.<sup>10, 11, 6</sup>

The findings of this study emphasize that the increasing use of digital advertising should be accompanied by a corresponding emphasis on evidence-based patient communication. Although advertisements effectively increase awareness of clear aligner therapy, the observed differences between professional perceptions, patient expectations, and treatment knowledge indicate that promotional material alone cannot support informed clinical decision-making. Consequently, clinicians play a pivotal role in translating commercially available information into individualized, evidence-based treatment recommendations.

Contemporary orthodontic literature acknowledges digital marketing as an essential component of modern practice while emphasizing that promotional material must remain scientifically accurate, transparent, and ethically responsible.<sup>8, 3</sup> The FDI Policy Statement on Advertising in Dentistry<sup>10</sup> advocates truthful and verifiable communication, whereas studies evaluating orthodontic marketing have highlighted concerns regarding selective presentation of treatment outcomes, limited discussion of treatment limitations,

and the increasing commercialization of orthodontic services.<sup>6, 14, 11, 12</sup>

Collectively, these findings reinforce that digital advertising should serve as an introduction to treatment rather than a substitute for professional consultation. Providing balanced information regarding treatment indications, limitations, expected outcomes, and patient responsibilities is essential to support shared decision-making, maintain public trust, and ensure that digital marketing contributes positively to contemporary orthodontic practice.

A key strength of the present study was its comparative design, which enabled direct evaluation of the influence of advertisements on clear aligner awareness and treatment-related decision-making from the perspectives of both general dental practitioners and the public. The inclusion of two complementary stakeholder groups, together with validated questionnaires containing common comparative items and an adequately powered sample, provided a comprehensive assessment of the perception gap between clinicians and prospective patients.

The findings should, however, be interpreted within the limitations of the study design. The cross-sectional nature of the survey precludes causal inference, while convenience sampling and self-administered online questionnaires may have introduced selection and response bias. Furthermore, the study evaluated perceived rather than actual treatment behaviour and was limited to a specific study population. Future multicentric longitudinal studies involving additional stakeholder groups, including orthodontists, are warranted to further evaluate the long-term influence of digital advertising and to develop evidence-based recommendations for responsible orthodontic marketing.

Collectively, the findings of the present study demonstrate that although digital advertisements have substantially improved awareness of clear aligner therapy, their influence on treatment-related decision-making is more nuanced than previously perceived. The observed differences between professional perceptions and patient-reported responses, together with the disparity between treatment awareness and treatment knowledge, highlight the importance of evidence-based communication in contemporary orthodontic practice. As digital marketing continues to evolve, advertisements should be viewed as a means of facilitating patient engagement rather than directing treatment decisions. Ensuring that promotional material is accurate, transparent, and supported by

professional counselling will be essential for promoting informed decision-making while maintaining ethical standards in orthodontic care.<sup>10, 11, 12, 3</sup>

## Conclusion

Digital advertising, particularly social media, was commonly reported as a source of clear aligner awareness; however, its perceived role in treatment-related decision-making differed substantially between GDPs and the public. While GDPs perceived advertising as a major driver of treatment seeking, the public reported a more multifactorial decision process dominated by personal motivation, professional recommendation, and perceived treatment benefits. These findings highlight the need for evidence-based patient education and ethically responsible digital communication to bridge the gap between treatment awareness and treatment understanding. As digital marketing continues to expand within orthodontics, advertisements should be regarded as a means of facilitating patient engagement rather than a substitute for professional consultation and individualized clinical decision-making.

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Table 1. Group I - GDP

| N<br>o<br>. | Ques<br>tion                                                                                             | Opti<br>on 1                               | Optio<br>n 2                                     | Opti<br>on 3                                        | Opti<br>on 4                             | O<br>pti<br>on<br>5 |
|-------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------|-----------------------------------------------------|------------------------------------------|---------------------|
| 1           | Prim<br>ary<br>ratio<br>nale<br>for<br>the<br>select<br>ion<br>of<br>clear<br>align<br>er<br>thera<br>py | Aest<br>hetic<br>s —<br>161<br>(92.0<br>%) | Lesser<br>treatm<br>ent<br>time<br>— 3<br>(1.7%) | Easie<br>r oral<br>hygie<br>ne —<br>4<br>(2.3<br>%) | Redu<br>ced<br>pain<br>— 7<br>(4.0<br>%) | —                   |

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|   |                                                                            |                           |                                 |                          |                                  |   |
|---|----------------------------------------------------------------------------|---------------------------|---------------------------------|--------------------------|----------------------------------|---|
| 2 | <b>Gender distribution of patients preferring clear aligners</b>           | Male — 4 (2.3%)           | Female s — 87 (49.7%)           | Equal (Both) — 84 (48%)  | —                                | — |
| 3 | <b>Age demographics of patients preferring clear aligners</b>              | Less than 18 — 0 (0%)     | 18–25 years — 156 (89.1%)       | 25–35 years — 18 (10.3%) | Above 35 — 1 (0.6%)              | — |
| 4 | <b>Occupational profile of patients preferring clear aligner therapy</b>   | Student — 91 (52.0%)      | Full-time employed — 83 (47.4%) | Unemployed — 0 (0%)      | Self-employed — 1 (0.6%)         | — |
| 5 | <b>Primary source through which patients became aware of clear aligner</b> | Advertisement — 161 (92%) | Word of mouth — 3 (1.7%)        | Self-interest — 4 (2.3%) | Doctor recommendation — 7 (4.0%) | — |

|   |                                                                                             |                                    |                                      |                                       |                                   |   |
|---|---------------------------------------------------------------------------------------------|------------------------------------|--------------------------------------|---------------------------------------|-----------------------------------|---|
|   | <b>therapy</b>                                                                              |                                    |                                      |                                       |                                   |   |
| 6 | <b>Primary clinical practice setting of the GDP</b>                                         | Solo/private practice — 69 (39.4%) | University/institution — 101 (57.8%) | Multi disciplinary team — 3 (1.7%)    | Corporate dental setup — 2 (1.1%) | — |
| 7 | <b>Duration of GDPs' clinical experience in prescribing clear aligners for malocclusion</b> | Less than a year — 55 (31.4%)      | 2–5 years — 41 (23.4%)               | More than 5 years — 2 (1.2%)          | Have not advised — 77 (44.0%)     | — |
| 8 | <b>Primary educational sources of knowledge regarding clear aligner therapy</b>             | Postgraduate training — 35 (20.0%) | Private courses — 23 (13.1%)         | Academic seminars/books — 105 (60.0%) | Others — 12 (6.9%)                | — |
| 9 | <b>Most frequently treated</b>                                                              | Spacing — 146                      | Rotation — 1 (28.0%)                 | Open bite — 0 (0%)                    | Deep bite — 28 (1.0%)             | — |

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|           | malocclusions utilizing clear aligners                                                                    | (83.4%)                             |                                     |                                             |                                                                |   |
|-----------|-----------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------------|----------------------------------------------------------------|---|
| <b>10</b> | <b>Volume of active clear aligner cases prescribed by GDPs within the preceding 12 months</b>             | 0–10 —<br><b>170</b><br>(97.1%)     | 11–20 —<br><b>4</b><br>(2.3%)       | 21–30 —<br><b>0</b><br>(0%)                 | 30+ —<br><b>1</b><br>(0.6%)                                    | — |
| <b>11</b> | <b>Standard time interval established by GDPs between consecutive clear aligner clinical appointments</b> | 1–2 weeks —<br><b>36</b><br>(20.6%) | 3–4 weeks —<br><b>35</b><br>(20.0%) | More than 4 weeks —<br><b>27</b><br>(15.4%) | Have n't done any clear aligner case —<br><b>77</b><br>(44.0%) | — |
| <b>12</b> | <b>Proportion of clear align</b>                                                                          | Less than 25% —<br><b>136</b>       | 25–50% —<br><b>37</b><br>(21.1%)    | 50–75% —<br><b>2</b><br>(1.2%)              | More than 75% —<br><b>0</b><br>(0%)                            | — |

|           | er cases relative to overall GDP caseload                                                             | (77.7%)                                                          |                                                        |                                           |                                                     |   |
|-----------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------|-----------------------------------------------------|---|
| <b>13</b> | <b>Perceived major limitations of clear aligner therapy by GDPs</b>                                   | Unable to treat complex malocclusions —<br><b>107</b><br>(61.1%) | Limited root movement control —<br><b>17</b><br>(9.7%) | Expensive —<br><b>46</b><br>(26.3%)       | Patient-dependent treatment —<br><b>5</b><br>(2.9%) | — |
| <b>14</b> | <b>GDPs' clinical perspective on prescribing clear aligners to patients with abnormal oral habits</b> | Yes —<br><b>32</b><br>(18.3%)                                    | No —<br><b>71</b><br>(40.6%)                           | In some cases —<br><b>63</b><br>(36.0%)   | Unsure —<br><b>9</b><br>(5.1%)                      | — |
| <b>15</b> | <b>Predominant advertising modalities utilized by GDPs</b>                                            | Social media —<br><b>162</b><br>(92.6%)                          | Flyers —<br><b>3</b><br>(1.7%)                         | TV advertisements —<br><b>2</b><br>(1.1%) | Others —<br><b>8</b><br>(4.6%)                      | — |

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|           |                                                                                                   |                                           |                                              |                                |                            |   |
|-----------|---------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------|--------------------------------|----------------------------|---|
| <b>16</b> | <b>Perceived impact of advertising on patients' selection of a dental clinic or aligner brand</b> | Most — <b>115 (65.7 %)</b>                | To some extent — <b>59 (33.7 %)</b>          | Not so much — <b>1 (0.6 %)</b> | Not at all — <b>0 (0%)</b> | — |
| <b>17</b> | <b>GDPs' primary objective for advertising clear aligners in dental practice</b>                  | To create awareness — <b>118 (67.4 %)</b> | To advertise the clinic — <b>43 (24.6 %)</b> | Others — <b>14 (8.0 %)</b>     | —                          | — |
| <b>18</b> | <b>GDPs' awareness of private advertising agencies promoting dental services</b>                  | Yes — <b>131 (74.9 %)</b>                 | Not sure — <b>34 (19.4 %)</b>                | No — <b>10 (5.7 %)</b>         | —                          | — |

|           |                                                                                                   |                                         |                                                        |                                          |   |   |
|-----------|---------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------------------------------|------------------------------------------|---|---|
| <b>19</b> | <b>GDPs' opinion on the minimum academic qualification required to prescribe clear aligners</b>   | Undergraduate degree — <b>28 (16 %)</b> | Undergraduate degree + fellowship — <b>62 (35.4 %)</b> | Postgraduate degree — <b>85 (48.6 %)</b> | — | — |
| <b>20</b> | <b>GDPs' estimation of the average cost range for clear aligner therapy</b>                       | < ₹60,000 — <b>17 (9.7 %)</b>           | ₹60,000–₹1,00,000 — <b>144 (82.3 %)</b>                | > ₹1,00,000 — <b>14 (8.0 %)</b>          | — | — |
| <b>21</b> | <b>GDPs' clinical opinion on the necessity of auxiliary attachments in specific aligner cases</b> | Yes — <b>114 (65.1 %)</b>               | Not sure — <b>60 (34.3 %)</b>                          | No — <b>1 (0.6 %)</b>                    | — | — |

|     |                                                                                           |                                                           |                                            |                                                        |                                                               |                             |
|-----|-------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------|-----------------------------|
| 22  | <b>Current clinical utilization status of clear aligner therapy by GDPs</b>               | Used in the past, not now — 3 (1.8%)                      | Never used, no intention to use — 7 (4.0%) | Have n't used, planning to use — 65 (37.1%)            | I don't have much idea about clear aligner therapy — 5 (2.8%) | Already in use — 95 (54.3%) |
| 23* | <b>Primary etiologies for the underutilization of clear aligners in clinical practice</b> | Clear aligner's limited orthodontic movement — 10 (12.4%) | Cost is higher — 63 (78.8%)                | No demand for clear aligners in my practice — 7 (8.8%) | —                                                             | —                           |

\*Responses were obtained only from GDPs who were not currently providing clear aligner therapy.

**Table 2. Group II – Public**

| No. | Question                                                            | Option 1               | Option 2                           | Option 3                                     | Option 4                  | Option 5 |
|-----|---------------------------------------------------------------------|------------------------|------------------------------------|----------------------------------------------|---------------------------|----------|
| 1   | <b>Primary consumer rationale for seeking clear aligner therapy</b> | Aesthetic — 84 (48.0%) | Lesser treatment time — 18 (10.3%) | Easier to maintain oral hygiene — 43 (24.6%) | Less painful — 30 (17.1%) | —        |

|   |                                                                                    |                            |                                       |                               |                                             |   |
|---|------------------------------------------------------------------------------------|----------------------------|---------------------------------------|-------------------------------|---------------------------------------------|---|
| 2 | <b>Gender distribution of the public preferring Clear Aligner Therapy</b>          | Male — 84 (48.0%)          | Female — 91 (52.0%)                   | Both male and female — 0 (0%) | —                                           | — |
| 3 | <b>Age demographics of the public preferring Clear Aligner Therapy</b>             | Less than 18 — 12 (6.9%)   | 18–25 — 85 (48.6%)                    | 25–35 — 6 (3.4%)              | Above 35 — 72 (41.1%)                       | — |
| 4 | <b>Occupational profile of public respondents preferring Clear Aligner Therapy</b> | Students — 60 (34.3%)      | Full-time employed — 69 (39.4%)       | Unemployed — 28 (16.0%)       | Self-employed — 18 (10.3%)                  | — |
| 5 | <b>Primary factors influencing the public's decision</b>                           | Advertisement — 43 (24.6%) | Word from family/friends — 36 (20.6%) | Self-interest — 55 (31.4%)    | Suggested treatment plan by the doctor — 41 | — |

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|   |                                                                                          |                              |                       |                              |                                      |                     |
|---|------------------------------------------------------------------------------------------|------------------------------|-----------------------|------------------------------|--------------------------------------|---------------------|
|   | on to pursue clear aligner therapy                                                       |                              |                       |                              | (23.6%)                              |                     |
| 6 | Primary media platforms where the public observed clear aligner advertisements           | Social media — 121 (69.1%)   | Flyers — 12 (6.9%)    | Television — 22 (12.6%)      | Newspaper advertisement — 20 (11.4%) | —                   |
| 7 | Public perception regarding the efficacy of clear aligners in treating all malocclusions | Yes — 37 (21.1%)             | No — 25 (14.2%)       | Unsure — 113 (64.7%)         | —                                    | —                   |
| 8 | Primary motivations for choosing a direct-to-consumer advertised                         | More convenient — 48 (27.4%) | Less cost — 12 (6.9%) | More attractive — 22 (12.6%) | All the above — 73 (41.7%)           | Others — 20 (11.4%) |

|    |                                                                          |                        |                                    |                          |                                   |                           |
|----|--------------------------------------------------------------------------|------------------------|------------------------------------|--------------------------|-----------------------------------|---------------------------|
|    | aligner company over an orthodontic consultation                         |                        |                                    |                          |                                   |                           |
| 9  | Most frequently recalled clear aligner brands from public advertisements | TOOTHSI — 55 (31.4%)   | 32 WATTS CLEAR ALIGNERS — 6 (3.4%) | INVISALIGN — 91 (52.1%)  | SNAZZY CLEAR ALIGNERS — 16 (9.1%) | SMILE ALIGNERS — 7 (4.0%) |
| 10 | Public estimation of the average cost range for clear aligner therapy    | < ₹60,000 — 55 (31.4%) | ₹60,000–₹1,00,000 — 102 (58.3%)    | > ₹1,00,000 — 18 (10.3%) | —                                 | —                         |
| 11 | Public estimation of the overall treatment duration for clear            | < 1 year — 42 (24.0%)  | 1–2 years — 92 (52.5%)             | > 2 years — 11 (6.4%)    | Unsure — 30 (17.1%)               | —                         |

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|    | aligner therapy                                                                     |                  |                 |                     |   |   |
|----|-------------------------------------------------------------------------------------|------------------|-----------------|---------------------|---|---|
| 12 | Public's self-assessed capability of complying with the 22-hour daily wear protocol | Yes — 24 (13.7%) | No — 68 (38.9%) | Unsure — 83 (47.4%) | — | — |
| 13 | Public awareness of necessary dietary modifications during clear aligner treatment  | Yes — 61 (34.9%) | No — 73 (41.7%) | Unsure — 41 (23.4%) | — | — |
| 14 | Public knowledge regarding appropriate points of contact for clinical               | Yes — 97 (55.4%) | No — 72 (41.2%) | Unsure — 6 (3.4%)   | — | — |

|    | inquiries or complications                                                                         |                              |                              |                            |   |   |
|----|----------------------------------------------------------------------------------------------------|------------------------------|------------------------------|----------------------------|---|---|
| 15 | Level of public confidence in direct-to-consumer aligner treatment lacking orthodontic supervision | Confident — 24 (13.7%)       | Unsure — 92 (52.6%)          | Not confident — 59 (33.7%) | — | — |
| 16 | Public awareness regarding the potential necessity of dental extractions in specific cases         | Yes — 30 (17.2%)             | Not sure — 49 (28.0%)        | No — 96 (54.8%)            | — | — |
| 17 | Public perception of the correlation                                                               | Yes, positively — 88 (50.2%) | Yes, negatively — 33 (18.9%) | No — 54 (30.9%)            | — | — |

|  |                                                    |  |  |  |  |  |
|--|----------------------------------------------------|--|--|--|--|--|
|  | between advertising and clinical treatment quality |  |  |  |  |  |
|--|----------------------------------------------------|--|--|--|--|--|

**Table 3. Comparison of common questionnaire responses between general dental practitioners and the public**

| Variable                                          | GDP n (%)                                                                                                  | Public n (%)                                                                                                    | $\chi^2$ | P value |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|----------|---------|
| <b>Primary reason for choosing clear aligners</b> | Aesthetics 161 (92.0%)<br>Lesser treatment time 3 (1.7%)<br>Oral hygiene 4 (2.3%)<br>Reduced pain 7 (4.0%) | Aesthetics 84 (48.0%)<br>Lesser treatment time 18 (10.3%)<br>Oral hygiene 43 (24.6%)<br>Less painful 30 (17.1%) | 106.509  | <0.001  |
| <b>Gender</b>                                     | Male 4 (2.3%)<br>Female 87 (49.7%)<br>Equal 84 (48.0%)                                                     | Male 84 (48.0%)<br>Female 91 (52.0%)                                                                            | 156.817  | <0.001  |
| <b>Age</b>                                        | <18: 0 (0.0%)<br>18–25: 156 (89.1%)<br>25–35: 18 (10.3%)<br>>35: 1 (0.6%)                                  | <18: 12 (6.9%)<br>18–25: 85 (48.6%)<br>25–35: 6 (3.4%)<br>>35: 72 (41.1%)                                       | 107.972  | <0.001  |
| <b>Occupation</b>                                 | Student 91 (52.0%)<br>Employed 83 (47.4%)<br>Unemployed 0 (0.0%)                                           | Student 60 (34.3%)<br>Employed 69 (39.4%)<br>Unemployed 28 (16.0%)                                              | 50.864   | <0.001  |

|                                             |                                                                                                                 |                                                                                                                       |         |        |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------|--------|
|                                             | Self-employed 1 (0.6%)                                                                                          | Self-employed 18 (10.3%)                                                                                              |         |        |
| <b>Primary factor influencing treatment</b> | Advertisement 161 (92.0%)<br>Word of mouth 3 (1.7%)<br>Self-interest 4 (2.3%)<br>Doctor recommendation 7 (4.0%) | Advertisement 43 (24.6%)<br>Family/Friends 36 (20.6%)<br>Self-interest 55 (31.4%)<br>Doctor recommendation 41 (23.4%) | 164.346 | <0.001 |
| <b>Estimated treatment cost</b>             | <₹60,000: 17 (9.7%)<br>₹60,000–1,00,000: 144 (82.3%)<br>>₹1,00,000: 14 (8.0%)                                   | <₹60,000: 55 (31.4%)<br>₹60,000–1,00,000: 102 (58.3%)<br>>₹1,00,000: 18 (10.3%)                                       | 27.726  | <0.001 |
| <b>Advertisement platform</b>               | Social media 162 (92.6%)<br>Flyers 3 (1.7%)<br>Television 2 (1.1%)<br>Newspaper 8 (4.6%)                        | Social media 121 (69.1%)<br>Flyers 12 (6.9%)<br>Television 22 (12.6%)<br>Newspaper 20 (11.4%)                         | 56.007  | <0.001 |