

A STUDY ON CONSUMER PERCEPTION TOWARDS TRADITIONAL BRACES

Submitted in partial fulfillment of the requirements for the award of

Master of Business Administration

by

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SCHOOL OF BUSINESS ADMINISTRATION

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **HARITHA V (42410094)** who have done the Project work entitled “**A Study On Consumer Perception Towards Traditional Braces**” under my supervision from October 2023 to December 2023.

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ABSTRACT

This research project delves into the intricate realm of consumer perception concerning traditional braces in orthodontic treatment. As orthodontic practices continue to evolve with advancements such as clear aligners and lingual braces, this study aims to investigate the contemporary attitudes, preferences, and concerns of consumers towards the conventional method of orthodontic correction—traditional braces. The research design incorporates a descriptive approach for data collection techniques. Through structured surveys, we aim to gather comprehensive insights into the factors influencing consumer choices when it comes to orthodontic treatment. Key variables under scrutiny include aesthetic concerns, perceived effectiveness, comfort, and overall satisfaction with traditional braces. Findings from this research project are anticipated to provide valuable insights for orthodontic practitioners, manufacturers, and policymakers in the healthcare industry. Understanding consumer preferences and concerns towards traditional braces will aid in tailoring orthodontic treatment options to better align with patient expectations, ultimately contributing to improved patient satisfaction and better oral health outcomes. Additionally, the study aims to contribute to the broader discourse on the intersection of technology, aesthetics, and healthcare decision-making in the evolving landscape of orthodontics.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

In the ever-evolving landscape of orthodontic care, the choice between traditional braces and newer alternatives has become a pivotal decision for individuals seeking to achieve a confident and aesthetically pleasing smile. As the field of orthodontics witnesses advancements such as invisible aligners and clear braces, the timeless efficacy of traditional braces continues to hold its ground. This project aims to delve into the intricate realm of consumer perception towards traditional braces, exploring the factors that influence their decision-making processes, expectations, and overall satisfaction with this enduring orthodontic solution.

The orthodontic industry, marked by a dynamic interplay of technological innovation and traditional methods, has experienced a paradigm shift in recent years. While innovations like clear aligners have gained prominence, traditional braces persist as a reliable and proven method for correcting dental misalignments. Understanding the nuanced preferences and perceptions of consumers regarding traditional braces is imperative for orthodontic practitioners, manufacturers, and researchers alike. This project seeks to bridge the gap in current knowledge by providing a comprehensive analysis of the factors that shape consumer attitudes towards traditional braces.

The objectives of this study encompass a thorough exploration of consumer awareness, expectations, and satisfaction levels related to traditional braces. By leveraging quantitative and qualitative research methodologies, we aim to uncover insights into the motivations behind choosing traditional braces, perceived advantages and disadvantages, and the impact of societal and cultural factors on decision-making. Furthermore, the project will shed light on the role of information sources, including healthcare professionals, peers, and online resources, in shaping consumer perceptions.

As we embark on this investigative journey, the findings of this report will not only contribute to the existing body of knowledge in orthodontics but also serve as a valuable resource for practitioners and industry stakeholders. By gaining a nuanced understanding of consumer perspectives, we aspire to facilitate informed decision-making for individuals seeking orthodontic treatment, while also offering insights that can inform advancements in orthodontic care and marketing strategies.

1.2 TRADITIONAL BRACES

Traditional braces, often referred to as metal braces, have long been a stalwart in the field of orthodontics, offering a time-tested solution for correcting dental misalignments and achieving a harmonious smile. Comprising small metal brackets affixed to each tooth and connected by a wire, traditional braces work by applying gentle and consistent pressure to guide teeth into their desired positions. Despite the advent of alternative orthodontic options, such as clear aligners and ceramic

braces, traditional braces remain a popular choice due to their effectiveness, durability, and versatility in addressing a wide range of orthodontic issues.

One of the key advantages of traditional braces lies in their ability to treat complex cases of misalignment, overcrowding, and bite issues. The robustness of the materials used ensures the stability of the treatment, allowing for precise control over tooth movement. Additionally, the affordability of traditional braces often makes them a more accessible option for individuals seeking orthodontic care.

While the functional benefits of traditional braces are evident, the visual aspect has undergone significant transformations over the years. Modern braces are sleeker and more discreet than their predecessors, with smaller brackets and a variety of colored bands that allow wearers to personalize their orthodontic experience. This evolution has contributed to a shift in societal perceptions, with traditional braces becoming not just a means of dental correction but also a form of self-expression for many.

However, despite their enduring popularity, traditional braces are not without challenges. The visibility of metal components may be a concern for some individuals, impacting their self-esteem during the treatment period. Discomfort and adjustments, though temporary, are also factors that contribute to the mixed perceptions surrounding traditional braces.

This dichotomy between the proven effectiveness of traditional braces and the evolving expectations of orthodontic patients forms the backdrop for the exploration of consumer perceptions in our project. By understanding the factors that influence individuals' choices and attitudes towards traditional braces, we aim to provide insights that can guide both practitioners and consumers in navigating the diverse landscape of orthodontic options.

1.3 FEATURES OF TRADITIONAL BRACES

Traditional braces, also known as metal braces, have been a reliable and effective orthodontic treatment for many years. The key features of traditional braces include:

1. Metal Brackets:

- Traditional braces consist of small metal brackets that are bonded to each tooth with a dental adhesive. These brackets serve as anchors for the wires that guide tooth movement.

2. Archwires:

- Archwires are thin, flexible metal wires that run through the brackets. These wires apply gentle pressure on the teeth, guiding them into the desired positions over time.

3. Elastic Bands:

- Elastic bands, also known as ligatures, are used to secure the archwires to the brackets. These bands come in a variety of colors, allowing wearers to personalize their braces.

4. Brackets with Hooks:

- Some brackets in the traditional braces setup have small hooks that can be used to attach rubber bands. These rubber bands play a role in adjusting the alignment of the jaw and bite.

5. Spacers:

- Spacers or separators may be used before the braces are applied to create space between certain teeth. This is typically done to make room for the bands that anchor the archwires.

6. Adjustment Mechanism:

- Traditional braces require periodic adjustments by an orthodontist. During these appointments, the orthodontist tightens or replaces the archwires to continue guiding the teeth into the desired positions.

7. Braces Bands:

- Bands, or orthodontic bands, are metal rings that are fitted around the back molars. These bands provide additional anchorage for the archwires.

8. Retention:

- After the active phase of treatment, individuals are usually required to wear a retainer. Retainers help maintain the new alignment of the teeth and prevent them from shifting back to their original positions.

9. Durability:

- Traditional braces are known for their durability. The metal components are robust and can withstand the forces exerted during the orthodontic treatment.

10. Versatility:

- Traditional braces are versatile and can be used to address a wide range of orthodontic issues, including crowded or misaligned teeth, overbites, underbites, and crossbites.

While these features make traditional braces effective in correcting various dental issues, it's important to note that advancements in orthodontics have also led to the development of alternatives such as clear aligners and ceramic braces, which offer different aesthetic and lifestyle considerations. The choice between traditional braces and alternative treatments often depends on the individual's orthodontic needs and personal preferences.

1.4 CUSTOMIZATION IN TRADITIONAL BRACES

While traditional braces are fundamentally a functional orthodontic appliance, there are ways in which they can be customized to add a personal touch or address

specific preferences of the wearer. Here are some aspects of customization in traditional braces:

1. Braces Colors:

- One of the most common ways to personalize traditional braces is by choosing the color of the elastic bands (ligatures) that secure the archwires to the brackets. Many orthodontic patients, especially younger individuals, enjoy selecting different colors to express their personality or celebrate holidays and events.

2. Colored Bands for Molars:

- Similar to the bands on the front brackets, some orthodontic patients may opt for colored bands on the molars. This adds an extra element of customization to the overall appearance of the braces.

3. Braces Accessories:

- There are accessories available that can be added to traditional braces, such as brackets with hooks or attachments. These may be used to attach headgear, rubber bands, or other orthodontic appliances, depending on the treatment plan.

4. Specialty Brackets:

- Some orthodontic practices offer specialty brackets or customized bracket shapes. While these may not be as common, they can add a unique touch to the braces.

5. Orthodontic Bands with Patterns:

- In addition to solid colors, some orthodontic practices offer bands with patterns or designs. This allows wearers to express themselves further through their braces.

6. Gold or Silver Braces:

- While traditional braces are typically made of stainless steel, some practices offer variations in material. Gold-plated or silver-plated brackets and bands can provide a more distinctive appearance.

7. Orthodontic Decals or Stickers:

- Non-permanent decals or stickers designed for use on braces can add a temporary and customizable element. These may include small designs or symbols that adhere to the brackets.

8. Brace Yourself Kits:

- Some orthodontic practices provide "Brace Yourself" kits that include items like toothbrushes, floss threaders, and other oral care accessories. These kits may be personalized or themed.

It's important to note that while these customization options can add a personal touch to traditional braces, the primary focus remains on the effectiveness of the orthodontic treatment. Orthodontic professionals will consider the individual's orthodontic needs and treatment plan when incorporating any customization elements to ensure that they do not compromise the functionality of the braces.

1.5 BENEFITS OF TRADITIONAL BRACES

Traditional braces, despite the rise of alternative orthodontic treatments, continue to offer numerous benefits. Here are some of the advantages of traditional braces:

1. Effectiveness in Complex Cases:

- Traditional braces are highly effective in treating a wide range of orthodontic issues, including severe misalignments, crowded teeth, overbites, underbites, and crossbites. Their versatility makes them suitable for complex cases that may be challenging for other orthodontic treatments.

2. Precise Tooth Control:

- The structure of traditional braces, with brackets and archwires, allows for precise control over each tooth's movement. This level of control is particularly important in cases where specific teeth need to be adjusted to achieve proper alignment.

3. Durability:

- Traditional braces are made of high-quality materials, usually stainless steel, making them durable and able to withstand the forces applied during the orthodontic treatment. This durability contributes to the overall effectiveness and success of the treatment.

4. Predictable Results:

- Orthodontists have extensive experience with traditional braces, and the outcomes of treatment are well-understood. This predictability is reassuring for both orthodontic professionals and patients, as they can anticipate the expected results based on established treatment protocols.

5. Cost-Effective:

- Traditional braces are often more cost-effective than some alternative orthodontic treatments. This makes them a more accessible option for individuals and families who may have budget constraints but still want a reliable and effective solution for correcting dental misalignments.

6. Comprehensive Bite Correction:

- Traditional braces can address not only the alignment of individual teeth but also correct issues related to the bite, including overbites,

underbites, and crossbites. This comprehensive approach ensures not only a straight smile but also improved functionality.

7. Customization Options:

- While functional in nature, traditional braces offer some degree of personalization through the choice of colored bands. Patients, particularly younger individuals, can express their personality by selecting different colors for the elastic bands during each adjustment.

8. Accessibility for All Ages:

- Traditional braces are suitable for patients of all ages, from children to adults. The versatility of this orthodontic option allows individuals to undergo treatment at different stages of life, addressing orthodontic concerns whenever they arise.

9. Orthodontic Expertise:

- Orthodontists are highly trained in the use of traditional braces. Their expertise in planning and adjusting treatments contributes to the overall success of the orthodontic journey.

While newer orthodontic technologies and treatments continue to emerge, the enduring benefits of traditional braces make them a reliable choice for many individuals seeking effective and comprehensive orthodontic care.

1.6 STATEMENT OF THE PROBLEM

In the rapidly evolving landscape of orthodontic care, marked by advancements in technology and a proliferation of treatment options, the consumer perception towards traditional braces stands as a critical and understudied facet. The decision-making process for orthodontic treatment is becoming increasingly complex, with individuals facing a spectrum of choices ranging from traditional metal braces to innovative alternatives such as clear aligners and ceramic braces. Against this backdrop, it is imperative to delve into the factors influencing consumer perceptions towards traditional braces and to identify the nuanced dynamics that shape their preferences, expectations, and overall satisfaction.

1.7 SCOPE OF THE STUDY

- The study aims to include participants from various age groups, genders, and backgrounds to capture a comprehensive understanding of consumer perceptions towards traditional braces.
- Participants with varying durations of traditional braces usage will be included to explore how the length of treatment may impact perceptions.
- The study will investigate the perceived impact of traditional braces on participants' social lives, self-esteem, speech, and daily activities.
- The questionnaire seeks to assess the comfort level and convenience experienced by individuals during their time with traditional braces, including any challenges faced in terms of eating or oral hygiene.

- Understanding the motivations behind choosing traditional braces and the initial thoughts or feelings of participants when advised to get braces will be explored.
- The study aims to gauge participants' satisfaction with the results of traditional braces post-treatment, including factors influencing their level of satisfaction.
- The collected data will be subjected to statistical analysis to identify trends, correlations, and significant differences in responses, helping to draw robust conclusions.
- Findings from this study aim to provide insights into consumer perspectives towards traditional braces, offering valuable information for dental professionals, researchers, and individuals considering or undergoing orthodontic treatment.
- By encompassing these aspects, the scope of the study seeks to provide a holistic view of consumer perceptions towards traditional braces, facilitating a nuanced understanding of the challenges and satisfactions associated with this orthodontic treatment.

1.8 OBJECTIVE OF THE STUDY

- The primary objective is to collect valuable information and insights from individuals who have experience with traditional braces, which helps in better understanding the patients perception.
- To identify the factors that influence the consumer perception towards traditional braces
- To identify the specific difficulties individuals face while having traditional braces
- To assess the comfort levels and experiences of individuals during their time of wearing traditional braces
- To Evaluate the overall satisfaction of individuals
- To provide individuals considering orthodontic treatment with comprehensive information about the experiences and perceptions of others, aiding them in making informed decisions about their own orthodontic care.
- To contribute to the existing body of knowledge in the field of orthodontics by addressing gaps in understanding consumer perceptions towards traditional braces, potentially informing future research directions and improvements in orthodontic practices.

1.9 LIMITATION OF THE STUDY

- Participants may experience recall bias, affecting the accuracy of their responses, especially when reflecting on their initial thoughts and experiences with traditional braces.

- The study relies on participants' subjective perceptions, which can be influenced by personal preferences, individual experiences, and emotional factors.
- The study's findings may be limited by the characteristics of the sample, and the results may not be fully representative of the broader population due to potential selection bias.
- Participants may provide responses that they believe are socially desirable rather than expressing their true opinions or experiences, leading to a potential bias in the data.
- The study may not fully capture cultural or regional variations in perceptions towards traditional braces, as attitudes may differ based on cultural norms and geographical locations.
- Findings from the study may not be entirely generalizable to all individuals undergoing orthodontic treatment, as individual experiences with traditional braces can vary widely.
- The questionnaire focuses on traditional braces, and perceptions may not account for advancements in orthodontic technology or alternative treatments, potentially limiting the study's relevance to evolving orthodontic practices.
- The study captures perceptions at a specific point in time and may not account for changing societal attitudes towards orthodontic treatment or evolving trends in dental care.

CHAPTER 2

REVIEW OF LITERATURE

2.1 REVIEW OF LITERATURE

R. S. Khan et al., (1990)

This study was undertaken to assess factors related to adult orthodontic treatment and to identify any associated trends. Case records of all patients (676) aged 18 years or over at the start of active orthodontic treatment at the Eastman Dental Hospital, London were examined. Variables associated with patients and their treatment (age, sex, source of referral, malocclusion, type of appliance, and interdisciplinary treatment including orthognathic surgery) were studied and the data analysed statistically. The percentage of female patients (72 per cent) Class III malocclusions (21.6 per cent) and Class III skeletal bases (26.2 per cent) was higher than found in studies on children.

Stuart I. Robb DDS et al., (1998)

The purpose of this investigation was to compare the effectiveness and duration of orthodontic treatment in adults and adolescents with a valid and reliable occlusal index. Another aim was to evaluate variables that may influence the effectiveness and duration of orthodontic treatment in general. Pretreatment and posttreatment study models were scored using the Peer Assessment Rating Index. On the basis of the results of this study of adult and adolescent patients with predominantly Class I malocclusions and treated with the extraction of four premolars, the following conclusions may be drawn: There were no statistically significant differences ($P > .05$) between adults and adolescents with respect to treatment effectiveness or treatment duration. The number of broken appointments and appliance repairs explained 46% of the variability in orthodontic treatment duration

A R Firestone et al., (1999)

The aim of this study was to investigate the relationship between (i) the pain and its side effects, anticipated by patients before orthodontic therapy, and (ii) the reported pain and its effects after the placement of initial archwires. Before treatment, 50 adolescent patients (median age 13.6 years, range 8.9-39.3 years, 28 female, 22 male) completed a questionnaire concerning their facial and dental appearance, and their expectations regarding pain, its influence on their daily lives, and changes in their facial and dental appearance as a result of orthodontic treatment.

Keun-Taek Oh et al., (2005)

This study was done to experiment which stainless steel bracket is best for orthodontic application and it concluded that the SR-50A bracket has good frictional property, corrosion resistance and biocompatibility with a lower probability of allergic reaction, compared with conventionally used SS brackets.

Garret Djeu et al., (2005)

This study objectively compares Invisalign (Align Technology, Santa Clara, Calif) treatment with braces. And concluded that Invisalign cases did not score as well as braces cases on the OGS, averaging 13 more points lost, implying that treatment results of braces are superior to those of Invisalign, given this practitioner's proficiency. OGS scores were similar in both groups for rotations, marginal ridge heights, space closure, and root alignment, but Invisalign OGS scores for occlusal contacts, posterior torque, and A-P discrepancies were not as good as those for braces.

Mahmoud K. Al-Omiri et al., (2006)

The objective of this study was to identify factors that may affect patients' satisfaction with their dentition after orthodontic treatment. Fifty patients (20 males and 30 females) who successfully had finished fixed orthodontic treatment were included in the study. All subjects were treated with upper and lower fixed orthodontic appliances for an average duration of 19 ± 4 months and were in retention stage (6–12 months) with upper Hawley and lower fixed bonded retainers. And concluded that total satisfaction scores of the DIDL questionnaire showed that 4% of the treated patients were dissatisfied with their teeth and scored below 0, 62% were relatively satisfied and scored between 0 and 0.69, and 34% were totally satisfied with their teeth.

M. S. Sayers et al., (2007)

The objective of the study is to describe patients' and their parents' expectations of orthodontic treatment. Conclusion of this study is that Patients and their parents share similar expectations of orthodontic treatment for most aspects of care, although parents are more realistic in their estimation of the duration of treatment and the initial visit. The expectations of patients differ from those of their parents with regard to dietary and drink restrictions in relation to orthodontic treatment. Ethnicity significantly influences expectations of orthodontic treatment, and this may relate to differences in the patients' and their parents' assessed outcome of care.

Man Zhang et al., (2007)

The aim of this study is to compare patients' expectations of the impact of wearing fixed orthodontic appliances on life quality with realities experienced over a 6-month period. And concluded that This study indicated the impact on QoL after insertion of fixed orthodontic appliances was considerably less than what child patients expected.

M. Elizabeth Bennett et al., (2007)

The aims of this study were to develop a reliable self-report measure of consumer satisfaction with orthodontic treatment, and to preliminarily assess its validity. The study concluded that the present instrument is reliable and can be used to assess three dimensions of parental satisfaction with their child's orthodontic treatment. Relationships between visible orthodontic outcome variables and parent satisfaction provide preliminary validity support for the instrument.

Henry W. Fields et al., (2008)

The purpose of this study was to assess appliance variables, including appliance type, brand, wire, and ligature tie, for their relative attractiveness. Demographic factors were also evaluated. And concluded that, for all demographic factors, attractiveness ratings were significantly different between alternative (clear trays and simulated lingual appliances), ceramic, and all self-ligating/stainless steel appliances. No differences between brands in each appliance type were found. Ratings of some ceramic appliances were significantly affected by archwire and ligature tie, depending on several demographic interactions.

Barbara Wędrychowska-Szulc et al., (2009)

The aims of this investigation were to examine patients' and parents/guardians' motivation for seeking orthodontic treatment and to determine the influence of age and gender in this process. The sample comprised 674 subjects (365 girls and 309 boys) aged 7–18 years and 674 of their parents/guardians, as well as 86 adult patients aged 19–42 years (57 females and 29 males). The principle motivational factor in children and adults seeking orthodontic treatment was the desire to improve aesthetics. From the parents/guardians perspective, the most important reason for seeking orthodontic treatment for their child was also the improvement of dental aesthetics. The percentage of patients whose decision to undergo treatment might be guided by dental or other professionals, or their parents/guardians decreased with increasing patient age.

Pamela M. Kenealy et al., (2010)

This study is a 20 year follow-up study compared the dental and psychosocial status of individuals who received, or did not receive, orthodontics as teenagers. And this study concluded that Longitudinal analysis revealed that the observed effect of orthodontic treatment on self esteem at outcome was accounted for by self esteem at baseline. Prior need for treatment assessed in childhood made a small contribution to the prediction of self-esteem 20 years later in adulthood. Dental status in adulthood, whilst statistically significant, appeared to be of minor importance in a model that included other psychological variables. When prior need for treatment was taken into account there was little objective evidence to support the assumption that orthodontics improves long-term psychological health.

Kenan Cantekin et al., (2011)

The purpose of this study was to assess changes in the oral health status in a group of young Turkish dental patients undergoing orthodontic therapy. And concluded that DMFT counts and the PI increased in a group of young dental patients undergoing orthodontic therapy, and thus patients undergoing orthodontic therapy must follow very rigid oral hygiene protocols.

Peter Arrow et al., (2011)

This study reports on the social acceptability of dental appearance and benefits of fixed orthodontic treatment (FOT) among a cohort of 13-year-old adolescents in 1988/1989 followed through to age 30 years in 2005/2006. And concluded that

FOT provided a significant benefit only for individuals in the “Desirable” group at age 13. FOT appeared to offer little long-term benefits in the social acceptability of dental appearance for the majority of individuals who underwent FOT.

Sona Pabari et al., (2011)

The motives for adults to seek orthodontic treatment are numerous and varied, whereas psychological traits appear to be closer to those of the general public than to orthognathic patients. And the study concluded that the desire to straighten teeth and improve the smile were primary motivating factors for adults seeking orthodontic treatment. Approximately half of the adult patients were self-motivated to seek treatment. This is of particular relevance, because internally motivated patients are more likely to be satisfied with their treatment outcome. The decision to undergo orthodontic treatment is complex and was influenced by various factors: the pressure to look good in today’s society and a teasing

Daniela Feu et al., (2012)

This study aims to evaluate the esthetic perception of different appliances by Brazilian lay adults and its influence in the attributed value of orthodontic treatment, considering evaluators' socioeconomic status, age and gender. And concluded that Clear aligners and sapphire brackets with esthetic archwire were considered better esthetic options in this sample. Nevertheless, patients were not willing to pay more money for appliances they deemed more esthetic, however, they were significantly influenced by their socioeconomic level and age.

Ricardo Alves de Souza et al., (2013)

The aim of this study was to elucidate patients' desires and doubts regarding orthodontic treatment, by means of a survey applied to 60 adult patients. The analysis of results revealed that most individuals (38.3 %) noticed treatment success after its conclusion. Occlusion deviation was pointed out by 66.7 % as the main reason for seeking treatment, and esthetics ranked as second (with 48.3 %). Treatment time was considered within the prediction by 46.7% of the interviewees and the results were judged as very good by 43.3 %. The social relations of most participants were not affected by treatment (73.3 %). Also, 58.3 % of the interviewees reported pain as the main complaint and 53.3 % found it difficult to use dental floss. Most participants saw the orthodontist as a professional who was concerned about their health (76.7 %), and believed that he/she was more able to treat them (96.6 %) when compared with the general practitioner.

Lucas G Abreu et al., (2013)

This study aim to evaluate preadolescent oral health related quality of life (OHRQoL) during the first month of fixed orthodontic appliance therapy. This study included a sample of 96 preadolescent children aged between 11 and 12 years undergoing orthodontic treatment with a fixed appliance. And concluded that One month after the placement of fixed orthodontic appliance, the preadolescents had positive alterations in their OHRQoL mainly in the emotional well-being domain.

H. Rakhshan et al., (2015)

This study assessed the intensity and duration of pain and discomfort caused by active orthodontic treatment. And concluded that Among the 67 patients, 65.7% experienced general dentogingival pain or discomfort and 34.3% had localized dentogingival pain or discomfort. Masticating soft foods reduced discomfort in the tongue, cheeks, and in or around the teeth and gingivae. Pain and discomfort were mostly moderate while masticating sticky, fibrous, and firm foods. Mild pains were mostly reported during tooth brushing and while consuming soft foods. Pain and discomfort tended to last for more than 4 weeks, except in the tongue, where pain and discomfort lasted less than 4 weeks.

Xia Tang et al., (2015)

Motivation is the impetus for patients to seek orthodontic treatment, affecting adherence, treatment outcomes, and satisfaction. The aim of this study was to assess the motivation of adult female patients seeking orthodontic treatment, and classify the patients according to their motivations. And the study concluded that the motivations of adult female patients seeking orthodontic treatment are complex. This study found that most adult female patients fell into one of four typical factor groups. The findings may improve the adherence of adult female patients by developing a more ideal treatment program.

Shristi Nadar et al., (2016)

The aim of this study was to assess the oral hygiene awareness among orthodontic patients. This research aims to find if patients undergoing orthodontic treatment are aware of the probable accumulation of dental plaque and the consequences of it, namely, bad breath, gum disease, and dental decay. This study concluded that There is a need to incorporate more oral hygiene programs in future. Extra attention should be given in educating and motivating the patients on oral hygiene practices during orthodontic treatment in a proper manner, which will be helpful to the patients in maintaining their oral hygiene.

Sarah Joanna Longstaf (2017)

This study is done to explore young people's perspectives of having a brace throughout their fixed orthodontic treatment. And it concluded that the young people regarded having a brace as a rite of passage through adolescence. In addition, having the brace removed, together with the educational transition was a symbolic event in their youth transition.

David W. White et al., (2017)

The aim of this study is to evaluate differences in discomfort levels between patients treated with aligners and traditional fixed orthodontic appliances. And concluded that Patients treated with traditional fixed appliances reported greater discomfort and consumed more analgesics than patients treated with aligners.

Yoonji Kim et al., (2017)

This questionnaire study aimed to estimate the overall frequencies of positive perception towards orthodontic treatment among adults categorized according to

age, sex, and area of living, and to identify barriers or negative perceptions preventing them from receiving orthodontic treatment. This study concluded that The middle-aged had a relatively high percentage of interest (above 45%) in orthodontic treatment. However, demographic characteristics were not significantly associated with the positive interest. These results highlight the need for educating the middle-aged about the limitations and possibilities of orthodontic treatment to increase its acceptance.

Carlos Flores-Mir et al., (2018)

The objective of this study were to assess patient satisfaction and quality of life among adults via 2 validated comprehensive questionnaires and to compare patient satisfaction and status in oral health-related quality of life immediately after orthodontic treatment in patients treated with Invisalign (Align Technology, San Jose, Calif) and those who received standard bracket-based treatment. Of the patients surveyed to assess their satisfaction and oral health-related quality of life immediately after completion of their orthodontic treatment, both the bracket-based and Invisalign treated patients had statistically similar satisfaction outcomes across all dimensions analyzed, except for eating and chewing: the Invisalign group reported more satisfaction. Patient satisfaction remained relatively similar 6 months later for the bracket-type treatment.

Belen Bolas-Colvee et al., (2018)

One of the main objectives of orthodontic treatment is to achieve an esthetic smile. This study set out to analyze differences in the perception of smile esthetics among patients before and after receiving orthodontic treatment. 250 Spanish patients analyzed a single photograph in which, by means of computer software, midline diastema, black triangle, gingival margin of the left central incisor, and gingival (“gummy”) smile were altered. Each patient analyzed these images before and after undergoing orthodontic treatment. Patients scored the photographs on a scale from 1 to 10. Statistical analyses of each group’s level of perception were carried out, identifying significant differences in evaluations before and after treatment, and in relation to subjects’ gender and age. Perceptions of midline diastema and gummy smile alter significantly between evaluations made by patients before and after orthodontic treatment. Gender influences the perception of the smile esthetics whereby women are more critical of midline diastema, black triangle and the gingival margin of the upper central incisor than men. Age also influences the esthetic perception of midline diastema and black triangle, whereby younger age groups are more critical than older subjects.

Peter H. Buschang et al., (2019)

The aim of this study is to compare the incidence of white spot lesions (WSLs) among patients treated with aligners and those treated with traditional braces. And concluded that Patients treated with aligners have less risk of developing WSLs than do patients treated with traditional braces, which could be partially due to shorter treatment duration, or better pretreatment OH.

Larissa Corradi-Dias et al., (2019)

This study aims to evaluate the impact of the first six months of orthodontic treatment with fixed appliances on the oral health-related quality of life of adolescents, comparing boys and girls, using a specific condition questionnaire. And concluded that The impact of the first six months of orthodontic treatment is more negative in female individuals than in male individuals. The results of this study may be useful for the oral healthcare provider during the counselling of adolescents undergoing fixed appliance therapy.

Azrul Hafiz et al., (2019)

This study is done to evaluate the Impact of Fixed Appliances (Braces) on Quality of Life. And concluded that fixed appliances (braces) have some detrimental effect to patient's quality of life and will influence their oral health impact profile.

Mohammad Moslem Imani et al., (2019)

This study aimed to review the effect of fixed orthodontic treatment on salivary levels of these ions by doing a meta-analysis on cross-sectional and cohort studies. And it concluded that corrosion of fixed orthodontic appliances leads to elevated salivary nickel and chromium levels early after the initiation of orthodontic treatment.

Min Zhu et al., (2019)

The aim of this study was to verify whether the treatment effectiveness of clear aligners was similar to the conventional fixed appliances. And the study concluded that both clear aligners and braces were effective in treating malocclusion. While braces were more effective in achieving great improvement, controlling teeth torque, and retention than aligners.

Allen Abbing et al., (2020)

The aim of the study was to compare duration of treatment with fixed appliances between adults and adolescents. And the study concluded that there is no statistically and clinically significant difference in the duration of comprehensive orthodontic treatment with fixed appliances was found.

Yassir A Yassir et al., (2019)

The main objective of this study was to evaluate the impact of labial fixed appliance orthodontic care on patient perception before, during, and after the treatment. There is a lack of high-quality studies in terms of systematic reviews and meta-analyses for assessing patient perception with fixed appliance orthodontic treatment. The aesthetic impact of malocclusion is the main motive for seeking orthodontic treatment. Quality of life reduces during the initial stages of orthodontic treatment but improves in the later stages of treatment. Assessment before, during, and after orthodontic treatment is necessary to comprehensively assess patient perception at all stages of care.

Ada Carolina Pango Madariaga et al., (2020)

This study is done to evaluate Impact of Fixed Orthodontic Appliance and Clear Aligners on the Periodontal Health. And the study concluded that no evidence of

difference was observed in the periodontal health of patients undergoing fixed orthodontic therapy and clear aligner therapy, when a dental hygienist provided regular check-ups and adequate oral hygiene instructions.

Jennifer E Kettle et al., (2020)

This qualitative research has identified how young people manage everyday life with an appliance. Understanding this process will help orthodontists to support their patients. Young people reported physical, practical and emotional impacts from their appliances. Despite these reported impacts, participants described 'getting used' to and, therefore, not being bothered by their appliance.

Hazik Bin Shahzad et al., (2020)

The aim of this study is to assess psychosocial impacts on oral health-related quality of life between individuals currently undergoing orthodontic treatment and those who have completed treatment. And concluded that Besides the normal and expected difficulties in eating, cleaning teeth, and speaking (i.e., functional impacts), individuals undergoing orthodontic treatment are prone to experience severe difficulties in smiling and going out. These issues are related to the psychosocial impacts and limitations of orthodontic treatment and demonstrate that the latter does not grant patients a higher status in society if they refrain from social settings and have difficulty smiling.

Anna Wexler et al., (2020)

This study aims at surveying the user experience of orthodontics treatment .The rise of direct-to-consumer (DTC) orthodontics has caused significant controversy among dentists and orthodontists. However, little is known about the actual harms or benefits experienced by users of at-home teeth alingers. And concluded that Although many respondents would have preferred traditional treatment from a dentist or orthodontist, they opted for DTC aligners because of cost and convenience.

Lishoy Rodrigues et al., (2020)

Fixed orthodontic components used in orthodontic treatment often act as a nidus for the retention of plaque and biofilm thereby resulting in Plaque associated gingivitis. This is because of the classic interplay of the host and the microbial ecosystem around the components. The common gingival changes in color, contour, texture, shape & size should alarm the patient and concerned orthodontist to prevent its further progression. The orthodontist and the patient should be made aware of the undesirable complications associated with the gingival response to the treatment. This study concluded that Oral health lies majorly in the hands of the patient by ensuring correct, efficient and meticulous oral hygiene practices. Every orthodontic patient should be motivated and educated with regards to the changes that occur in the gingiva with respect to the orthodontic treatment and good oral hygiene practices.

S. Saccomanno et al., (2021)

This study highlights how important it is for the clinicians to consider the requests of the patients they are treating, because the patients' needs change according to their age, gender, and socioeconomic status. It is remarkable that some kinds of patients are more concerned about the aesthetic aspect of the orthodontic device, likely due to their social and job position, which is something that may warrant further investigation. Furthermore, it seems very important to adapt the instruments and devices to the kind of patients who are undergoing treatment, because, from this study, it is evident that there are subjects who are more sensitive to pain than others. Moreover, this study reveals that a significant number of patients underwent a previous treatment. That can be caused by the development of less visible devices, like lingual braces or clear aligners, and by an increasing request for an improvement of the appearance of the smile, which has always been a key factor of social life. The new, less visible devices and the high aesthetic expectation associated with adult awareness may be sufficient motivators for a retreatment.

Azrul Hafiz et al., (2021)

This study shows that the most common discomfort experienced by patients with removable appliance are increased in saliva flow, interferes with mastication and altering speech. Apart from that, ulcers, pain in the mouth and appliance breakages are the most common pain experience by the patients with fixed appliances.

Afnan A. Ben Gasseem (2022)

This study sought to systematically review the literature to determine whether clear aligner treatment results in different patient perceptions of treatment process and outcomes compared with conventional fixed appliance treatment. A systematic review was conducted to identify studies that examined differences in patient perceptions between clear aligners and conventional fixed appliance treatment. Studies were identified through searching relevant terms using PubMed and Embase. There was the strongest evidence that clear aligners had a positive impact with respect to treatment process compared with fixed orthodontic appliances. This study highlights that clear aligners may be effective for improving treatment-process-related outcomes among orthodontic patients. More studies need to be conducted to determine whether clear aligners have a beneficial impact with respect to treatment outcomes

Reem A Alansari et al., (2022)

The purpose of this study is to explore adult laypeople's perceptions of the attractiveness, acceptability, preference and economic value of different orthodontic appliances when they consider these appliances for themselves and for their children. And concluded that Adults preferred more innovative aesthetic appliances over traditional ones and were willing to pay more to have them placed on themselves but not on their children.

Neal D. Kravitz et al., (2022)

This study aimed to determine what percentage of patients switched from Invisalign to braces to finish treatment. And concluded that One in every 6 patients (17.2%)

switched from Invisalign to braces. Invisalign treatment required an average of 2.5 refinement scans, and only 6.0% of patients could complete their treatment without a single refinement scan.

Sherry Lee (2022)

The aim of this study is to evaluate the experience of different orthodontic treatments. And concluded that Self-consciousness, aesthetics and previous financial constraints were the main motivating factors for participants seeking treatment and cost was the most influential factor when selecting a specific treatment modality. The information provided to each participant prior to commencing treatment was not equal, however patient experience with orthodontic treatment in New Zealand was generally positive. The challenges faced by participants throughout their course of treatment included broken brackets, appointment availabilities, pain, poor aligner fit and quality, a lack of communication from certain DTC CA companies as well as COVID-19.

Eric Lin et al., (2022)

The aim of the study is to compare the treatment and posttreatment effects of Invisalign aligners that incorporated SmartForce features and attachments to traditional fixed appliances. And concluded that patients with simple malocclusions require 4.8 months longer treatment times with aligners than traditional braces, the treatment and 6-month posttreatment occlusal outcomes are similar.

Bhavna Shroff et al ., (2022)

The aims of this study were to (1) investigate and compare the educational value of the most popular YouTube (www.youtube.com; Google, San Bruno, Calif) orthodontic patient testimonials between braces, in-office aligners (IOA), and direct-to-consumer aligners (DTCA), and (2) classify the emotional response of the viewers through sentiment analysis of the video comments. And concluded that The initial YouTube search on March 31, 2019, yielded a total of 1.30 million video results: 440,000 for braces experience, 93,400 for Invisalign experience, and 761,000 for Smile Direct Club experience. The YouTube search engine reported a similar total estimate for the search on April 14, 2019. On both search days, the first 50 videos for each of the 3 searches were selected. The same procedure was repeated 2 weeks later, demonstrating slight differences between the first 50 videos.

Li Mei et al., (2023)

The aim of this study was to design an orthodontic tooth brushing technique and compare its effectiveness with the traditional modified Bass technique. And it concluded that the new orthodontic tooth brushing technique reduced the PI in patients wearing fixed orthodontic appliances, demonstrating a promising clinical potential for orthodontic patients to improve their oral hygiene.

Meyassara Samman et al., (2023)

Financial concerns deter many people from seeking orthodontic care. Fake braces replicate the real orthodontic braces but are not functional and are priced at a lower cost. These products are available through illegal and unregistered merchants, who use social media for advertising their products. This study aimed to analyze Arabic Twitter posts related to fake braces. And concluded that Although many of the tweets were against the use of fake braces, a sizable number of advertisement tweets promoted fake braces. Efforts should be made to educate the public about the risks of using fake braces and to emphasize the importance of seeking a licensed orthodontist for treatment

Laura Dorr et al., (2023)

At Dr Griffin's practice, only about 20% of patients were getting clear aligners, and he was frustrated that there wasn't a digital workflow for the 70% to 80% of cases that needed traditional braces. He found that those patients could not be treated as accurately as clear-aligner patients because information about braces was obtainable only visually. It became obvious to him that better technology was needed for braces. Because he needed the type of data that was easily provided by the software that came with customizable clear aligners, he began uploading every braces case to his clear-aligner software to map all the details, from jaw angles to occlusal contacts to whether there was a need for interproximal reduction.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

The Research Design undertaken for the study is Descriptive Research Design. A descriptive research design is a type of research methodology that focuses on observing and describing the characteristics, behaviours, and conditions of a phenomenon without manipulating variables. Research methodology helps to identify the consumer perception and their experiences towards traditional braces. This Research methodology is framed in order to find the factors influencing the consumer perception, the challenges and satisfaction level associated with traditional braces.

3.2 SAMPLING TECHNIQUE

3.2.1 Convenience sampling method

This project employs convenience sampling method. A convenience sample is one of the main types of non-probability sampling methods. A convenience sample is made up of people who are easy to reach. The questionnaire has been distributed to the people whoever are convenient to reach.

3.3 SOURCE OF DATA

This study used both primary and secondary data.

3.3.1 PRIMARY DATA

The primary data is collected through questionnaire. The questionnaire was circulated among the patients whoever are wearing traditional braces with the help of known doctor.

3.3.2 SECONDARY DATA

The secondary data was collected from reviewing various literature and browsing various websites.

3.4 SAMPLE SIZE

The sample size for the study is 110.

3.5 SAMPLE DESIGN

It is a particular definite plan formulation before collecting the data from population. The research should select a particular sample. In sampling, there are 2 types of sampling. They are probability sampling and non-probability sampling. In this research, only non probability sampling is used.

Sampling

- Sampling design : Non-probability sampling

- Sampling technique : convenience sampling
- Sample unit : Patients
- Sample size : 110 respondents

3.6 PERIOD OF STUDY

The study was conducted for a period of three months from September 2023 – November 2023.

3.7 HYPOTHESIS

Hypothesis 1:

- **Null Hypothesis (H0):** The level of comfort experienced while wearing traditional braces does not significantly impact overall satisfaction with the treatment.
- **Alternative Hypothesis (H1):** Individuals who report higher levels of comfort while wearing traditional braces are more likely to be satisfied with the treatment

Hypothesis 2:

- **Null Hypothesis (H0):** There is no significant association between the duration of treatment and the extent of oral improvement.
- **Alternative Hypothesis (H1):** There is a significant association between the duration of treatment and the extent of oral improvement.

3.8 TOOLS FOR ANALYSIS

Questionnaire was created in order to receive the necessary response required from the sample to achieve the research objective. The tools used for this are

3.8.1 PERCENTAGE ANALYSIS

Research questions are always answered with a descriptive statistic: generally, either percentage or mean. Percentage is appropriate when it is important to know how many of the participants gave a particular answer. Generally, percentage is reported when the responses have discrete categories.

3.8.2 ANALYTICAL TOOLS(SPSS)

Tool for testing the Hypothesis (SPSS)

- CHI-SQUARE
- ORDINAL REGRESSION

ORDINAL REGRESSION

Ordinal regression is a statistical technique used when the dependent variable is ordinal, meaning it has ordered categories but the intervals between the categories may not be uniform. This regression method is appropriate when you are dealing

with data that is more than nominal (categorical) but less than interval or ratio scale. Ordinal regression is a valuable tool when dealing with data that falls between categorical and continuous, providing a way to model and predict the order of categories in the dependent variable while accounting for the ordinal nature of the data. It is often implemented using statistical software packages like R, Python (with libraries like Stats models or scikit-learn), or dedicated statistical software like SPSS.

CHI-SQUARE

The chi-square test is a statistical test used to determine if there is a significant association or independence between two categorical variables. It is based on the comparison of observed frequencies in a contingency table with the frequencies that would be expected if the variables were independent. The chi-square test is commonly used in various fields, including biology, social sciences, and market research, to examine relationships between categorical variables.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

PERCENTAGE ANALYSIS

4.1 Age of the respondents

4.1.1 Table indicating the age of the respondents

S.NO	AGE	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Below 18	6	5.5%
2	18-25	76	69.1%
3	26-35	27	24.5%
4	35-55	1	0.9%
5	Above 55	0	0%
Total		110	100%

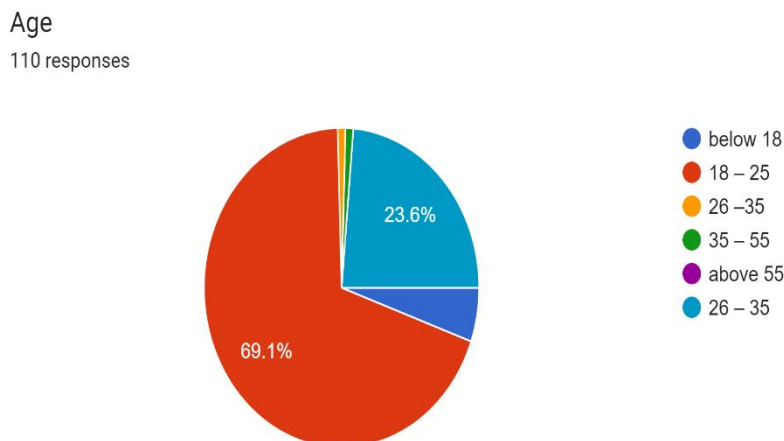
INTERPRETATION

From the above data, total Respondents are 110 from which 6 respondents are Below 18 which contributes 5.5%, 76 respondents are between 18 - 25 which contributes 69.1%, 27 respondents are between 26 – 35 which contributes 24.5%, 1 respondent is between 35-55 which contributes 0.9% and 0 respondents for Above 55 which contributes 0%.

INFERENCE

Majority of 69.1% of the respondents are between the age group of 18 – 25.

4.1.2 Chart showing the age of the respondents



4.2 Gender of the respondents

4.2.1 Table indicating the gender of the respondents

S.NO	GENDER	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Female	83	75.5%
2	Male	27	24.5%
Total		110	100%

INTERPRETATION

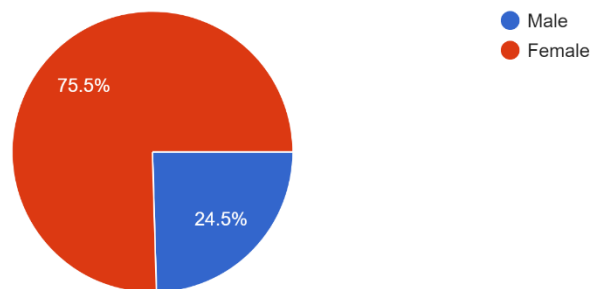
From the above table it is interpreted that the male respondents are 27 which contributes 24.5% and female respondents are 83 which contributes 75.5%.

INFERENCE

Majority of 75.5% of the respondents are female.

4.2.2 Chart showing the gender of the respondents

Gender
110 responses



4.3 Occupation of the respondent

4.3.1 Table indicating the Occupation of the respondent

S.NO	OCCUPATION	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Student	53	48.2%
2	Employee	49	44.5%
3	Business	2	1.8%
4	Others	6	5.5%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that the student respondents are 53 which contributes 48.2%, employee respondents are 49 which contributes 44.5%, business

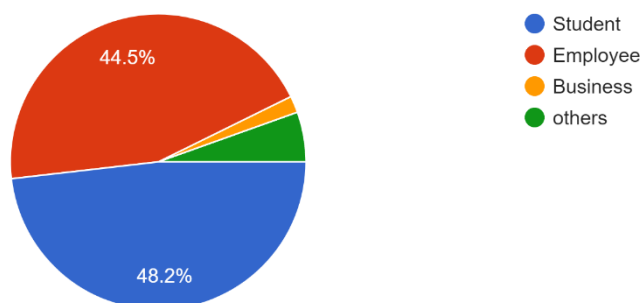
respondents are 2 which contributes 1.8% and other respondents are 6 which contributes 5.5% of total.

INFERENCE

Majority of 48.2% of the respondents belong to student category.

4.3.2 Chart showing the Occupation of the respondent

Occupation
110 responses



4.4 Income of the respondents

4.4.1 Table indicating the income of the respondents

S.NO	INCOME	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	No income	54	49.1%
2	Below 10000	1	0.9%
3	10000-15000	16	14.5%
4	15000-30000	27	24.5%
5	30000-50000	9	8.2%
6	Above 50000	3	2.7%
Total		110	100%

INTERPRETATION

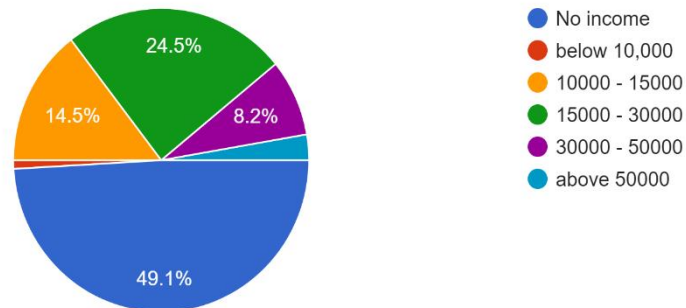
From the above table it is interpreted that no income respondents are 54 which contributes 49.1%, income below 10000 respondent is 1 which contributes 0.9%, income between 10000 – 15000 respondents are 16 which contributes 14.5%, the income between 15000 – 30000 respondents are 27 which contributes 24.5%, the income between 30000 -50000 respondents are 9 which contributes 8.2 % and income above 50000 are 3 which contributes 2.7% of the total.

INFERENCE

Majority of 49.1% of the respondents belong to no income category.

4.4.2 Chart showing the income of the respondents

Income
110 responses



4.5 Reason for using traditional braces

4.5.1 Table indicating the reason for using traditional braces

S.NO	REASON	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Misalignment	38	34.5%
2	Gapped teeth	34	30.9%
3	Crooked teeth	14	12.7%
4	Protruding teeth	24	21.8%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that misalignment respondents are 38 which contributes 34.5%,gapped teeth respondents are 34 which contributes 30.9%,crooked teeth respondents are 14 which contributes 12.7% , protruding teeth respondents are 24 which contributes 21.8% of the total.

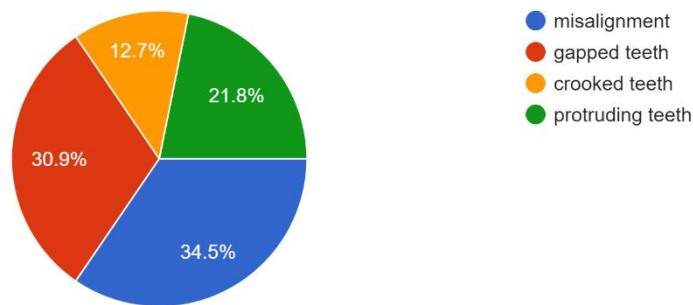
INFERENCE

Majority of 34.5% of the respondents using traditional braces for misalignment.

4.5.2 Chart showing the reason for using traditional braces

What is the reason for using traditional braces ?

110 responses



4.6 Initial thoughts when considering traditional braces

4.6.1 Table indicating the initial thoughts of the respondents

S.NO	INITIAL THOUGHTS	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Positive	71	64.5%
2	Negative	5	4.5%
3	Neutral	34	30.9%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that the positive respondents are 64.5%, negative respondents are 4.5% and neutral respondents are 30.9%.

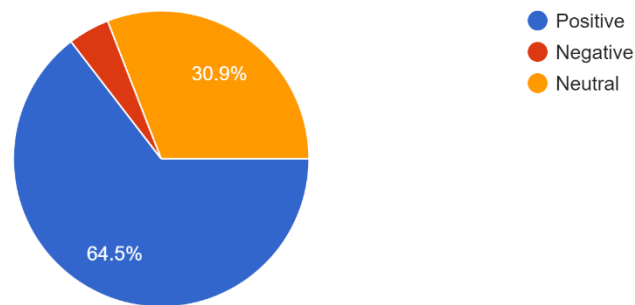
INFERENCE

Majority of 64.5% of the respondents had a positive initial thoughts towards traditional braces.

4.6.2 Chart showing the initial thoughts of the respondents

How would you describe your initial thoughts when considering traditional braces?

110 responses



4.7 Factors influencing the consumer perception

4.7.1 Table indicating the factors influencing the consumer perception

Case Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
\$consumerperception ^a	110	100.0%	0	0.0%	110	100.0%

a. Dichotomy group tabulated at value 1.

\$consumerperception Frequencies

		Responses		Percent of Cases
		N	Percent	
factors influencing consumers ^a	effectiveness	45	23.0%	40.9%
	cost	33	16.8%	30.0%
	recommendation	53	27.0%	48.2%
	aesthetic	9	4.6%	8.2%
	compliances	16	8.2%	14.5%
	belief	39	19.9%	35.5%
	others	1	0.5%	0.9%
Total		196	100.0%	178.2%

a. Dichotomy group tabulated at value 1.

INTERPRETATION

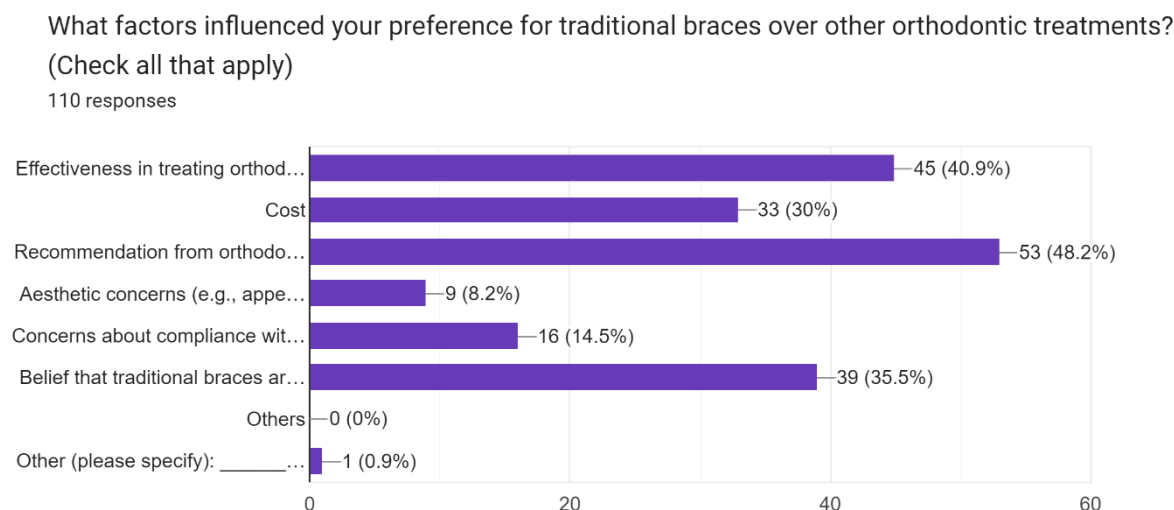
From the above table it is interpreted that effectiveness respondents are 40.9%, cost respondents are 30 %, recommendation respondents are 48.2 % , aesthetic

concern respondents are 8.2% ,concerns about compliances are 14.5 %, belief on traditional braces respondents are 35.5%, others respondents are 0.9%.

INFERENCE

Majority of 48.2% of the respondents have chosen the traditional braces because of the recommendation from doctor

4.7.2 Chart showing the factors influencing the consumer perception



4.8 Concerns or fears related to getting traditional braces

4.8.1 Table indicating Concerns or fears related to getting traditional braces

S.NO	CONCERN OR FEAR	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Yes	68	61.8%
2	No	42	38.2%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that the respondents having concern or fear are 61.8% and the respondents not having concern or fear are 38.2%.

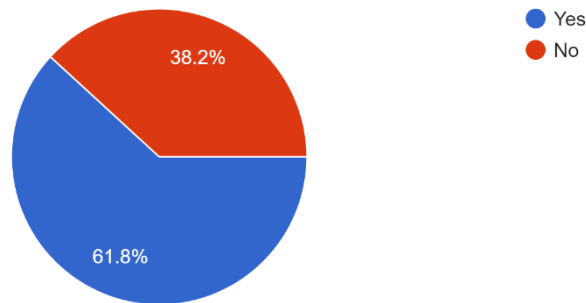
INFERENCE

Majority of 61.8% of the respondents had fear or concern before getting their traditional braces.

4.8.2 Chart showing Concerns or fears related to getting traditional braces

Did you have any concerns or fears related to getting traditional braces?

110 responses



4.9 Consumer perception about the appearance of traditional braces

4.9.1 Table indicating Consumer perception about the appearance of traditional braces

S.NO	APPEARANCE	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Comfortable	26	23.6%
2	Self-conscious	10	9.1%
3	Embarrassed	39	35.5%
4	Neutral	35	31.8%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that respondents feeling comfortable are 23.6% ,respondent feeling self-conscious are 9.1%, respondent feeling embarrassed are 35.5% ,respondent feeling neutral are 31.8%.

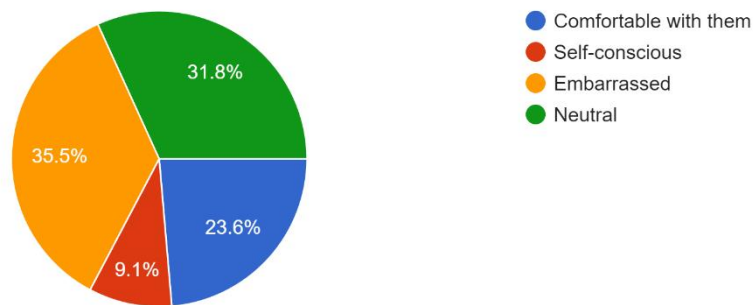
INFERENCE

Majority of 35.5% of respondents are feeling embarrassed while wearing traditional braces.

4.9.2 Chart showing Consumer perception about the appearance of traditional braces

How did you feel about the appearance of traditional braces when you are wearing them?

110 responses



4.10 Duration of their treatment

4.10.1 Table indicating the duration of their treatment

S.NO	DURATION	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	1 year	37	33.6%
2	2 years	53	48.2%
3	3 years	11	10%
4	More than 3 years	9	8.2%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that the respondent wearing for 1 year are 33.6%, respondents wearing for 2 years are 48.2%, respondents wearing for 3 years are 10% and the respondents wearing for more than 3 years are 8.2%.

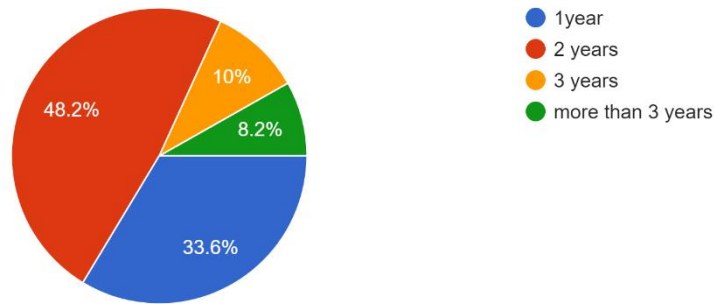
INFERENCE

Majority of 48.2% of the respondents are wearing the traditional braces for 2 years.

4.10.1 Chart showing the duration of their treatment

How long are you wearing traditional braces?

110 responses



4.11 Comfortability of the patients

4.11.1 Table indicating the comfortability of the patients

RATING(1-10)	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
10	4	3.6%
9	14	12.7%
8	25	22.7%
7	24	21.8%
6	11	10%
5	18	16.4%
4	2	1.8%
3	5	4.5%
2	3	2.7%
1	4	3.6%
Total	110	100%

INTERPRETATION

From the above table it is interpreted that 3.6% of the respondents have rated 10, 12.7% of the respondents have rated 9, 22.7% of the respondents have rated 8, 21.8% of the respondents have rated 7, 10% of the respondents have rated 6, 16.4% of the respondents have rated 5, 1.8% of the respondents have rated 4, 4.5% of the respondents have rated 3, 2.7% of the respondents have rated 2, 3.6% of the respondents have rated 1.

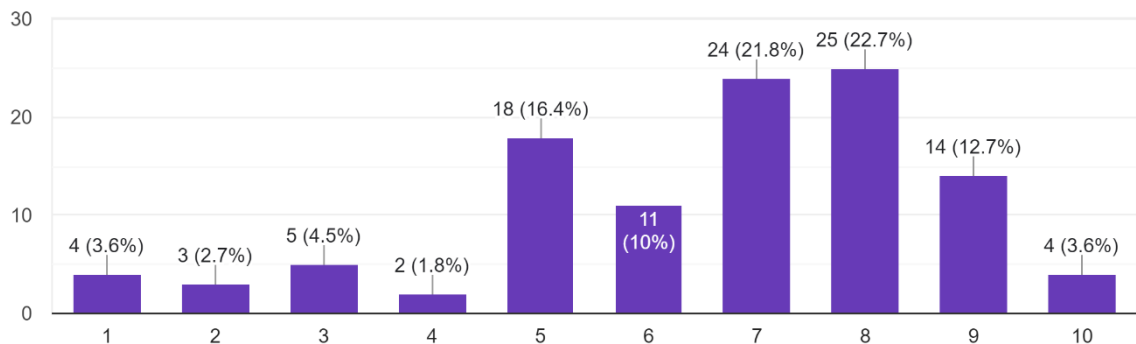
INFERENCE

Majority of 22.7% of the respondents have rated 7 out of 10 regarding the comfortability of the traditional braces.

4.11.2 Chart showing the comfortability of the patients

On a scale of 1 to 10 (1 being very uncomfortable, 10 being very comfortable), how comfortable are you while wearing traditional braces?

110 responses



4.12 Pain or discomfort during and after getting traditional braces

4.12.1 Table indicating pain or discomfort during and after getting traditional braces

S.NO	DISCOMFORT OR PAIN	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Yes	101	91.8%
2	No	9	8.2%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that 91.8% of the respondents have experienced pain and 8.2% of the respondents have not experienced any pain or discomfort during the treatment.

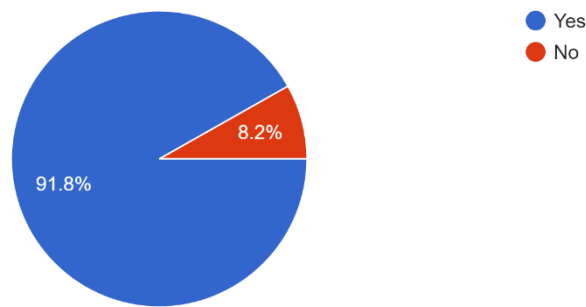
INFERENCE

Majority of 91.8% of the respondents have experienced pain or discomfort during and after getting traditional braces

4.12.2 Chart showing pain or discomfort during and after getting traditional braces

Did you experience any pain or discomfort during and after getting traditional braces?

110 responses



4.13 Difficulties or challenges faced while wearing traditional braces

4.13.1 Table indicating the difficulties or challenges faced while wearing traditional braces

S.NO	DIFFICULTIES	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Eating	68	61.8%
2	Speaking	20	18.2%
3	Maintenance	22	20%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that 61.8% of the respondents have eating difficulty, 18.2% of the respondents have speaking difficulty and 20% of the respondents have maintenance difficulty.

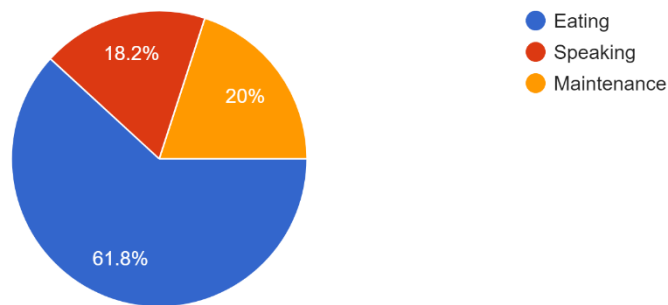
INFERENCE

Majority of 61.8% of the respondents are facing eating difficulty while wearing traditional braces.

4.13.2 Chart showing the difficulties or challenges faced while wearing traditional braces

What kind of difficulties or challenges did you face while having traditional braces?

110 responses



4.14 Doctor consultation for checkups and adjustment

4.14.1 Table indicating doctor consultation for checkups and adjustment

S.NO	CHECKUPS & ADJUSTMENT	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Two weeks once	3	2.7%
2	Monthly once	90	81.8%
3	Two months once	15	13.6%
4	Three months once	2	1.8%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that 2.7% of the respondents visit two weeks once, 81.8% of the respondents visit monthly once, 13.6% of the respondents visit two months once, 1.8% of the respondents visit three months once.

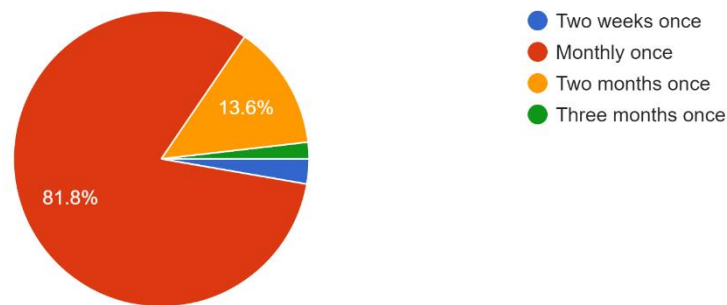
INFERENCE

Majority of 81.8% of the respondents visits the doctor monthly once for their checkups.

4.14.2 Chart showing doctor consultation for checkups and adjustment

How often do you visit your orthodontist for adjustments and check-ups during the treatment?

110 responses



4.15 Confidence of the respondents

4.15.1 Table indicating the confidence of the respondents

S.NO	CONFIDENCE	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Yes	47	42.7%
2	No	63	57.3%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that 42.7% of the respondents confidence have affected due to traditional braces and 57.3% of the respondents confidence have not affected due to traditional braces.

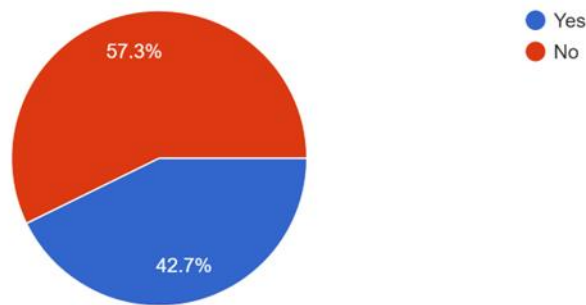
INFERENCE

Majority of 57.3% of the respondents confidence have not affected as a result of wearing traditional braces.

4.15.2 Chart showing the confidence of the patients

Did having traditional braces affect your confidence?

110 responses



4.16 Satisfaction regarding the aesthetic aspects of the traditional braces

4.16.1 Table indicating the Satisfaction regarding the aesthetic aspects of the traditional braces

S.NO	SATISFIED	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Yes	65	59.1%
2	No	45	40.9%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that 59.1% of the respondents are satisfied with the aesthetic aspects and 40.9% of the respondents are not satisfied with the aesthetic aspects.

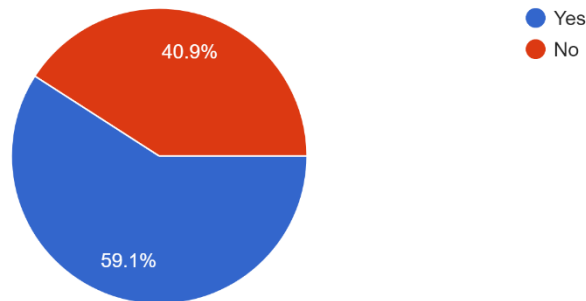
INFERENCE

Majority of 59.1% of the respondents are satisfied with the aesthetic aspects of the traditional braces.

4.16.2 Chart showing Satisfaction regarding the aesthetic aspects of the traditional braces

Are you satisfied with the aesthetic aspects of traditional braces (e.g., color options, visibility, etc.)?

110 responses



4.17 Improvement in oral health or functionality

4.17.1 Table indicating the Improvement in oral health or functionality

S.NO	IMPROVEMENT	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Yes	98	89.1%
2	No	12	10.9%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that 89.1% of the respondents are noticing oral health improvement and 40.9% of the respondents are not noticing oral health improvement.

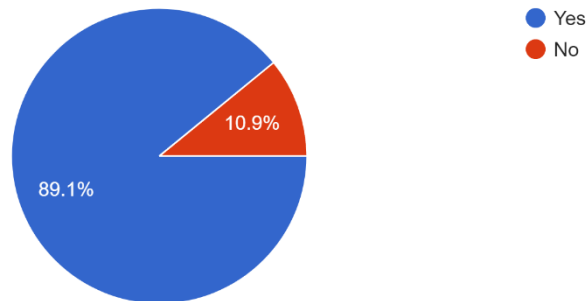
INFERENCE

Majority of 89.1% of the respondents are noticing oral health improvement as a result of having traditional braces.

4.17.2 Chart showing the Improvement in oral health or functionality

Did you notice any improvements in oral health or functionality as a result of having traditional braces?

110 responses



4.18 Maintenance of good oral hygiene while wearing traditional braces

4.18.1 Table indicating oral health maintenance

S.NO	ORAL HYGIENE	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Yes	85	77.3%
2	No	25	22.7%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that 77.3% of the respondents are able to maintain good oral hygiene and 22.7% of the respondents are not able to maintain good oral hygiene.

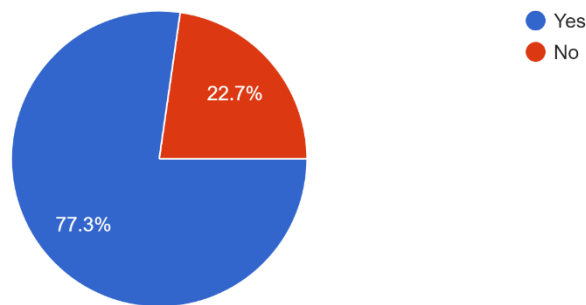
INFERENCE

Majority of 77.3% of the respondents are able to maintain good oral hygiene while wearing traditional braces.

4.18.2 Chart showing oral health maintenance

Are you able to maintain good oral hygiene while wearing traditional braces?

110 responses



4.19 Awareness of other orthodontic treatments

4.19.1 Table indicating the awareness of other orthodontic treatments

S.NO	ORAL HYGIENE	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Yes	84	76.4%
2	No	26	23.6%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that 76.4% of the respondents are aware of the other orthodontic treatments and 23.6% of the respondents are not aware of the other orthodontic treatment.

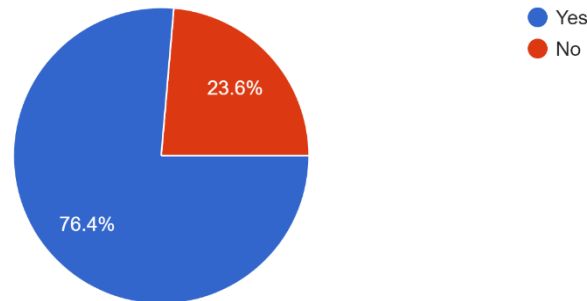
INFERENCE

Majority of 76.4% of the respondents are aware of the other orthodontic treatments such as invisible aligners or ceramic braces.

4.19.2 Chart showing the awareness of other orthodontic treatments

Are you aware of alternative orthodontic treatment options such as clear aligners (Invisalign) or ceramic braces?

110 responses



4.20 Satisfaction with the results of traditional braces

4.20.1 Table indicating the satisfaction with the results of traditional braces

S.NO	SATISFACTION	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Very Satisfied	19	17.3%
2	Somewhat satisfied	49	44.5%
3	Neutral	39	35.5%
4	Somewhat dissatisfied	1	0.9%
5	Very dissatisfied	2	1.8%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that 17.3 % of the respondents are very satisfied, 44.5% of the respondents are somewhat satisfied , 33.5% of the respondents are neutral, 0,9% of the respondents are somewhat dissatisfied and 1.8% of the respondents are very dissatisfied with the result of the traditional braces.

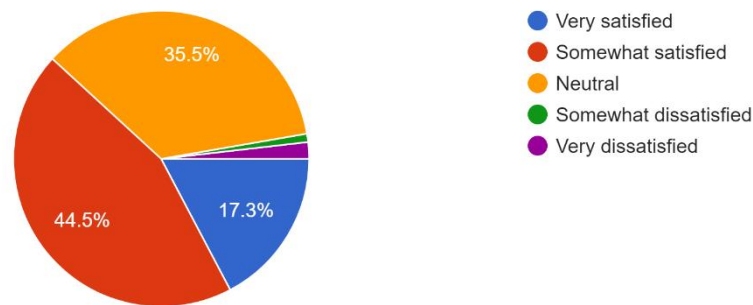
INFERENCE

Majority of 44.5% of the respondents are somewhat satisfied with the result of the traditional braces.

4.20.2 Chart showing the satisfaction with the results of traditional braces

How satisfied are you with the results of traditional braces?

110 responses



4.21 Recommending traditional braces to others

4.21.1 Table indicating the recommending traditional braces to others

S.NO	RECOMMENDATION	NO OF RESPONDENTS	PERCENTAGE ANALYSIS
1	Yes	97	88.2%
2	No	13	11.8%
Total		110	100%

INTERPRETATION

From the above table it is interpreted that 88.2% of the respondents willing to recommend it to others and 11.8% of the respondents are not willing to recommend it to others.

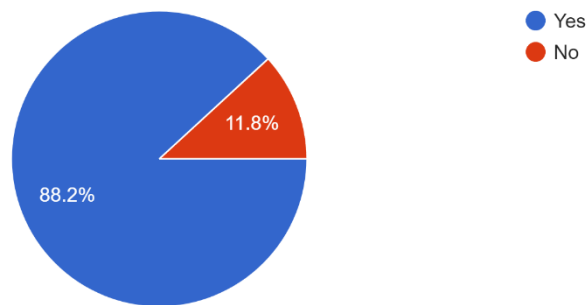
INFERENCE

Majority of 88.2% of the respondents willing to recommend the traditional braces to others

4.21.2 Chart showing the recommending traditional braces to others

Would you recommend traditional braces to someone considering orthodontic treatment?

110 responses



4.22 HYPOTHESIS TESTING

Hypothesis 1:

- **Null Hypothesis (H0):** The level of comfort experienced while wearing traditional braces does not significantly impact overall satisfaction with the treatment.
- **Alternative Hypothesis (H1):** Individuals who report higher levels of comfort while wearing traditional braces are more likely to be satisfied with the treatment

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	93.032			
Final	69.112	23.920	9	.004

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	40.359	27	.047
Deviance	30.404	27	.296

Link function: Logit.

Case Processing Summary

		N	Marginal Percentage
satisfaction	Very satisfied	19	17.3%
	Somewhat satisfied	49	44.5%
	Neutral	39	35.5%
	Somewhat dissatisfied	1	0.9%
	Very dissatisfied	2	1.8%
comfortable	1	4	3.6%
	2	3	2.7%
	3	5	4.5%
	4	2	1.8%
	5	18	16.4%
	6	11	10.0%
	7	24	21.8%
	8	25	22.7%
	9	14	12.7%
	10	4	3.6%
Valid		110	100.0%
Missing		0	
Total		110	

INTERPRETATION

The p value is 0.004 which is less than the significance level (0.05) hence null hypothesis(H0) is rejected. H1 is accepted

INFERENCE

Therefore, Individuals who report higher levels of comfort while wearing traditional braces are more likely to be satisfied with the treatment

Hypothesis 2:

- **Null Hypothesis (H0):** There is no significant correlation between the duration of treatment and the extent of oral improvement.
- **Alternative Hypothesis (H1):** There is a significant correlation between the duration of treatment and the extent of oral improvement.

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.113	.704
	Cramer's V	.113	.704
N of Valid Cases		110	

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.407 ^a	3	.704
Likelihood Ratio	2.370	3	.499
Linear-by-Linear Association	1.195	1	.274
N of Valid Cases	110		

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is .98.

duration * Oral improvement Crosstabulation

			Oral improvement		Total
			Yes	No	
duration	1year	Count	32	5	37
		Expected Count	33.0	4.0	37.0
	2 years	Count	47	6	53
		Expected Count	47.2	5.8	53.0
	3 years	Count	10	1	11
		Expected Count	9.8	1.2	11.0
	more than 3 years	Count	9	0	9
		Expected Count	8.0	1.0	9.0
Total	Count	98	12	110	
	Expected Count	98.0	12.0	110.0	

INTERPRETATION

The p value is 0.704 which is greater than the significance value (i.e 0.05) hence null hypothesis (H0) is accepted. H1 is rejected

INFERENCE

Therefore, there is no significant correlation between the duration of treatment and the extent of oral improvement.

CHAPTER 5

FINDINGS, SUGGESTIONS AND CONCLUSION

5.1 FINDINGS

- Majority of 69.1% of the respondents are between the age group of 18 – 25.
- Majority of 75.5% of the respondents are female.
- Majority of 48.2% of the respondents belong to student category.
- Majority of 49.1% of the respondents belong to no income category.
- Majority of 34.5% of the respondents using traditional braces for misalignment.
- Majority of 64.5% of the respondents had a positive initial thoughts towards traditional braces.
- Majority of 48.2% of the respondents have chosen the traditional braces because of the recommendation from doctor.
- Majority of 61.8% of the respondents had fear or concern before getting their traditional braces.
- Majority of 35.5% of respondents are feeling embarrassed while wearing traditional braces.
- Majority of 48.2% of the respondents are wearing the traditional braces for 2 years.
- Majority of 22.7% of the respondents have rated 7 out of 10 regarding the comfortability of the traditional braces.
- Majority of 91.8% of the respondents have experienced pain or discomfort during and after getting traditional braces.
- Majority of 61.8% of the respondents are facing eating difficulty while wearing traditional braces.
- Majority of 81.8% of the respondents visits the doctor monthly once for their checkups.
- Majority of 57.3% of the respondents confidence have not affected as a result of wearing traditional braces.
- Majority of 59.1% of the respondents are satisfied with the aesthetic aspects of the traditional braces.
- Majority of 89.1% of the respondents are noticing oral health improvement as a result of having traditional braces.
- Majority of 77.3% of the respondents are able to maintain good oral hygiene while wearing traditional braces.
- Majority of 76.4% of the respondents are aware of the other orthodontic treatments such as invisible aligners or ceramic braces.
- Majority of 44.5% of the respondents are somewhat satisfied with the result of the traditional braces.
- Majority of 88.2% of the respondents willing to recommend the traditional braces to others.

- From the hypothesis 1, it is concluded that Individuals who report higher levels of comfort while wearing traditional braces are more likely to be satisfied with the treatment.
- From the hypothesis 1, it is concluded that there is no significant correlation between the duration of treatment and the extent of oral improvement.

5.2 SUGGESTION

- Schedule regular check-ins to monitor progress and address any concerns or discomfort.
- Providing visual progress updates, such as before-and-after photos, can motivate patients and reinforce the positive impact of their treatment.
- Offer emotional support services to help patients cope with fears, concerns, or anxieties associated with wearing braces. Counselling sessions or support groups can provide a platform for sharing experiences and advice.
- Offer proactive pain management strategies and advice to minimize discomfort during and after adjustments. This could include recommending over-the-counter pain relievers, providing orthodontic wax, or suggesting specific foods that are easier to eat.
- Implement virtual try-on tools that allow patients to visualize how different bracket and band colors will look on their teeth. This empowers the patients to make informed decisions about their braces' appearance.

5.3 CONCLUSION

The survey concluded that a considerable percentage of respondents are satisfied with the traditional braces and noticed oral health improvements. The primary reason for choosing traditional braces was often based on professional recommendations from doctors, highlighting the influential role of healthcare providers in the decision-making process. A notable proportion of respondents expressed fear or concern before getting traditional braces, and a substantial number reported feeling embarrassed while wearing them. However, the impact on confidence and social interactions varied, with a majority reporting that their confidence remained unaffected. In summary, while traditional braces are effective in addressing orthodontic concerns, the survey highlights areas for improvement in patient education, comfort management, and emotional support.

REFERENCES

- Min Zhu," A comparison of treatment effectiveness between clear aligner and fixed appliance therapies" BMC Oral Health 19, Article number: 24 (2019)
- Keun-Taek Oh," A stainless steel bracket for orthodontic application", *European Journal of Orthodontics*, Volume 27, Issue 3, June 2005, Pages 237–244
- Allen Abbing," Duration of orthodontic treatment with fixed appliances in adolescents and adults: a systematic review with meta-analysis", *Progress in Orthodontics* 21, Article number: 37 (2020)
- Ada Carolina Pango Madariaga," Impact of Fixed Orthodontic Appliance and Clear Aligners on the Periodontal Health: A Prospective Clinical Study", *Dent. J.* 2020, 8(1), 4
- Kenan Cantekin," Effects of orthodontic treatment with fixed appliances on oral health status: A comprehensive study", [Volume 6, Issue 4](#), December 2011, Pages 235-238
- Mohammad Moslem Imani," Effect of Fixed Orthodontic Treatment on Salivary Nickel and Chromium Levels: A Systematic Review and Meta-Analysis of Observational Studies", *Dent. J.* 2019, 7(1), 21
- Li Mei," An orthodontic tooth brushing technique to enhance oral hygiene in patients wearing fixed orthodontic appliances: A randomized controlled trial", Volume 21, Issue 3, Pages: 495-656 August 2023
- Sarah Joanna Longstaf," Exploring Young People's Perspectives of Fixed Orthodontic Treatment", The University of Sheffield Faculty of Medicine Dentistry and Health. School of Clinical Dentistry, April 2017
- Jennifer E Kettle," Managing orthodontic appliances in everyday life: A qualitative study of young people's experiences with removable functional appliances, fixed appliances and retainers", Volume 47, Issue 1, February 3, 2020
- Larissa Corradi-Dias," Impact of the onset of fixed appliance therapy on adolescents' quality of life using a specific condition questionnaire: A cross-sectional comparison between male and female individuals", Volume 46, Issue 3, May 30, 2019
- Lucas G Abreu," Preadolescent's Oral Health-related Quality of Life during the First Month of Fixed Orthodontic Appliance Therapy", Volume 40, Issue 3, September 1, 2013
- Peter Arrow," Social acceptability of dental appearance and benefits of fixed orthodontic treatment: A 17-year observational cohort study", Volume 72, Issue 2, 28 November 2011
- Anna Wexler," Direct-to-consumer orthodontics: surveying the user experience", Volume 151, Issue 8, August 2020, Pages 625-636.e4

ANNEXURE- QUESTIONNAIRE

**A STUDY ON CONSUMER PERCEPTION TOWARDS
TRADITIONAL BRACES**

1.Age of the respondent :

a)below 18 b) 18 – 25 c) 26 – 35 d) 35 -44 e) 45 – 54 f)above 55

2.Gender of the respondent :

a) Female b) Male

3.Occupation of the respondent :

a) Student b) employee c) business d) others

4. Income

a) No income b)below 10,000 c)10,000-15,000 d) 15,000-30,000 e)30,000 - 50,000 f) above 50,000

5. what is the reason for using traditional braces?

a) misalignment b) gapped teeth c)crooked teeth d) protruding teeth

6.How would you describe your initial thoughts when considering traditional braces?

a)Positive b)Negative c)Neutral

7. What factors influenced your preference for traditional braces over other orthodontic treatments? (Check all that apply)

A)Effectiveness in treating orthodontic issues

b) Cost

c)Recommendation from orthodontist

d)Aesthetic concerns (e.g., appearance of braces)

e)Concerns about compliance with removable aligners (if applicable)

f)Belief that traditional braces are more suitable for complex orthodontic issues

g)Others

8.Did you have any concerns or fears related to getting traditional braces?

a) Yes b) No

9. How long are you wearing traditional braces?

a) 1year b) 2 years c) 3 years d)more than 3 years

10.On a scale of 1 to 10 (1 being very uncomfortable, 10 being very comfortable), how comfortable are you while wearing traditional braces?

11. Did you experience any pain or discomfort during and after getting traditional braces? Please describe your experience

a) yes b) no

12. Were there any specific challenges or difficulties you faced while having traditional braces?

A) eating b) speaking c) maintenance

13. How often do you visit your orthodontist for adjustments and check-ups during the treatment?

a) monthly once b) 2 months once c) 3 months once

14. Did having traditional braces affect your confidence?

a) yes b) no

15. Are you satisfied with the aesthetic aspects of traditional braces (e.g., color options, visibility, etc.)? a) yes b) no

16. Do you notice any improvements in oral health or functionality as a result of having traditional braces? A) yes b) no

17. Are you able to maintain good oral hygiene while wearing traditional braces? Any specific challenges? a) yes b) no

18. Are you aware of alternative orthodontic treatment options such as clear aligners (Invisalign) or ceramic braces? a) yes b) no

19. How satisfied are you with the results of traditional braces?

a) Very satisfied b) Somewhat satisfied c) Neutral d) Somewhat dissatisfied
e) Very dissatisfied

20. Would you recommend traditional braces to someone considering orthodontic treatment?

a) yes b) no