COMPARISON OF PORCELAIN VS. COMPOSITE VENEER MATERIALS ON PATIENT'S SATISFACTION

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ABSTRACT

Objective: This study aimed to evaluate the satisfaction levels of different materials used for the fabrication of dental veneers. Furthermore, it intended to fill a gap in the current literature by helping both participants and dentists to make a more informed decision when it comes to veneers selection. *Methods:* The study recruited participants from Temple University School of Dentistry. Participants received information about the study's purpose, risks, and benefits and provided verbal consent before completing a phone evaluation. A brief questionnaire composed of 20 questions assessed satisfaction with dental veneers in areas such as aesthetics, functionality, longevity, and overall satisfaction. The sur- vey applied descriptive statistics, such as mean, standard deviation, and frequencies, to evaluate the characteristics of the sample. *Results:* A total of 288 patients were screened for the study and 61 participants agreed to participate. Participants were primarily female (68%). When asked to evaluate their satisfaction, participants reported high levels of satisfaction, with an average score of 4.51 out of 5, denoting a positive experience. Those with porcelain veneers reported slightly higher satisfaction levels (*M=4.63).* However, there were non-significant differences in satisfaction with aesthetics, functionality, longevity, and overall satisfaction between the two types of veneers. *Conclusions:* The study mainly aimed to compare participants' satisfaction levels with porcelain and composite dental veneers and revealed high overall satisfaction levels with both materials. Demographic fac- tors like age and gender did not predict satisfaction levels. These outcomes may have been restricted by multiple factors, such as the small sample size and limited range of satisfaction scores

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CHAPTER 1

INTRODUCTION

In the past, teeth with undesirable shapes and colors were most commonly restored using dental crowns, a process that required substantial grinding of tooth tissue. This process weakens teeth structures and results in the loss of a significant amount of healthy tooth tissue. It can, therefore, lead to changes in the natural sensation of chewing and stimulate periodontal tissue, especially if the crowns invade the biological width. Due to these drawbacks, dental researchers have sought less invasive methods. Veneers have emerged as a preferable alternative to full crowns, offering significant advantages in certain cases. These advantages include a more conservative approach to teeth grinding, minimal invasiveness, preservation of the intact cervical portion of teeth, high aesthetic quality, excellent compatibility with soft tissues, and long-term sustainability when properly prepared (Nugala et al., 2012).

Recent research has indicated an increasing concern among many patients regarding the appearance of their anterior teeth (Alqahtani et al., 2021). Studies have revealed that around one- third of patients who have undergone teeth restoration, particularly in the anterior area, are dissatisfied with one or more aspects of their dental work (Serra-Pastor et al., 2021). This dissatisfaction commonly pertains to the shape and color of the restored teeth. A survey by Douch International supported these results (Tin et al., 2011). In recent years, there has been an increased interest in the aesthetic appearance of their anterior teeth, especially among younger individuals and women. While cosmetic concerns were not always a priority for many in the past, there is now a significant demand for cosmetic dental treatments.

Cosmetic dentistry aims to improve or maintain the aes- thetic appearance of the teeth. Dental veneers are a popular option for achieving a supe- rior smile. Both direct and indirect techniques, such as Resin and Porcelain, can be used (Abbasi et al., 2022). The procedure of dental veneers is not a recent innovation; their first introduction dates back to the early 20th century, pioneered by Dr. Charles Pincus in the 1930s (Dietschi et al., 2011). Dr. Pincus invented dental veneers to temporarily im- prove the smiles of actors and actresses in Hollywood. In the beginning, they were made from acrylic material and were never considered as a permanent solution for covering teeth. In the mid-1950s, Dr. Michael Buonocore, a practitioner and oral scientist, made a significant breakthrough in adhesive dentistry by introducing bonding systems (Dietschi et al., 2011). This innovation laid the foundation for the modern dental bonding tech- niques crucial to the development of the dental veneers known today.

Over subsequent years, due to advancements in materials and techniques, the quality and longevity of dental veneers have dramatically improved; dental veneers were accompanied by flawless smiles at this point, which made them even more promoted.

Furthermore, in recent years, there has been genuine advancement in dental veneers, with new technology emerging, such as computer-aided designs and computer-aided manufac- turing. Additionally, 3D printing using spray machines has made dental veneer fabrica- tion easy, precise, and quick. This technological advancement has enabled individuals to receive dental veneers in a matter of hours, significantly reducing the waiting time (Pini et al., 2012).

Dental veneers are most commonly considered cosmetic procedures; however, they can also serve as a solution for restoring functionality and protecting teeth in several conditions (Pini et al., 2012). First, the most common indication for veneers includes restoring teeth discolored by various factors such as fluorosis, aging, staining, and medically induced discolorations (e.g., by tetracycline), as well as amelogenesis and dentinogenesis imperfecta. Second, veneers can effectively restore fractured anterior teeth, especially at the edge. Third, they can correct teeth morphology issues such as micro and macrodontia. Finally, veneers can address minor teeth alignments (Mayekar, 2012). However, dental veneers are not universally applicable for all types of dental issues. There are unfavorable conditions for dental veneer treatment, including bruxism, Class III teeth relations, poor oral hygiene, periodontitis, and insufficient enamel thickness (Zhang et al., 2021). Many studies have reported positive clinical outcomes with veneers, showing a survival rate of 91% over 20 years (Layton et al., 2012).

In the past, most of the research on oral health-related quality of life (OHQoL) has mainly focused on chronic conditions as these issues are the main concern of OHQoL. For example, maintaining reasonable life quality expectations for patients with cancer is always a priority. However, cosmetic dentistry, although not a primary concern in this context, significantly impacts OHQoL by improving the self-esteem of patients as well as their ability to smile, speak, and appear socially confident (Baijiu et al., 2017).

Untreated carious or discolored teeth, especially when misaligned or severely damaged in the anterior region, are often associated with stigmatization, which influences a patient's psychological status (Baijiu et al., 2017).

Two main types of dental veneers exist: porcelain (including zirconia) and composite veneers. Porcelain veneers are made from solid or layered material, whereas composite veneers are made from tooth-colored resin. The choice between them depends on various factors, including aesthetic superiority, durability, and natural appearance. While porcelain veneers provide superior aesthetics, durability, and resistance to staining and wearing, composite veneers offer a more cost-effective alternative and are easier to repair and adjust (Assaf et al.,2023).

Patients seek dental veneers to correct the shape and discoloration of teeth, close gaps, or fix minor misalignments in anterior teeth. The procedure of dental veneer starts with a pre- treatment assessment, followed by clarifying patient expectations and treatment planning to provide the best outcome and ensure patient satisfaction. Patients must understand the limitations of dental veneers so they can have a better understanding of what they can expect from this procedure (Pini et al., 2012).

Throughout the past decade, advancements in various aspects of this procedure have made the process more efficient, easier, and joyful. For example, introducing new technology, such as 3D printing and digital smile design is assuring a revolutionary shift in dental veneer fabrication from a multi-step procedure to a single-step process. People can now receive their veneers on the same day, thanks to new advancements in materials. Resin-reinforced porcelain and alternative materials provide enhanced quality, aesthetics, and durability with minimum invasion of the tooth structure (YE et al, 2023). In conclusion, dental veneers provide patients with solutions to many dental problems, such as misalignment, discoloration, and misshapen teeth. The goal of this study is to better understand how satisfied patients are with different veneer types and identify what factors most significantly influence their satisfaction. Dental veneers can help patients to perfect their smile and achieve the quality of life they have always wanted.

Problem Statement

The main use of dental veneers is to improve the shape and color of misaligned or decolorized teeth. Although they can provide multiple benefits, they have several limitations due to various factors such as the position of teeth, bruxism, and space.

Veneers, made from different materials, such as composite and porcelain, offer aesthetic and functional benefits. However, little research exists on understanding how these mate- rials differ in terms of patient satisfaction. The journey does not end with getting veneers; adjustments may be necessary over time. Research suggests that several factors can influence follow-up satisfaction, including how the material performs in terms of functionality, how patients deal with eating and speech abilities, practical concerns, instances of chipping or the need for restoration, and the overall clinical experience. These factors can affect whether individuals would recommend the procedure and whether they get what they expected.

The main objective of this study is, therefore, to bridge this gap in the existing literature. The study also seeks to guide patients and dentists toward more informed decisions regarding the timing and conditions favorable for selecting the appropriate dental material for veneers. It also seeks to identify variables that can contribute to overall patient satisfaction, such as clinical experience, comfort in eating, and unimpeded speech.

Research Questions and Hypothesis

The primary objective of this research is to examine the impact of porcelain and composite veneer materials on patient satisfaction. It was hypothesized that patients would express higher satisfaction with porcelain veneers compared with resin veneers. Furthermore, the study investigated the influence of age and gender on satisfaction levels. Two null hypotheses were tested at a significance level of 0.05: one proposing that there is no correlation between age and satisfaction, and the other suggesting that gender might have no influence satisfaction levels (Nalbandian et al., 2009).

CHAPTER 2

REVIEW OF LITERATURE

Dental veneers, made of porcelain or composite resin, have become essential in enhancing the appearance of teeth. Selecting the appropriate veneer material is essential to ensure patient satisfaction. Research has emphasized the impact of these materials on various aspects of patients' experience (Alothman et al., 2018). This study explores how the choice of veneer material affects aesthetics, speech, eating habits, and longevity, thus guiding dentists in making treatment decisions.

Aesthetic preferences vary among patients. While some aim for a Hollywood smile, others prefer a natural look that suits their individual features. Factors such as how realistic the veneers appear compared to natural teeth, speech clarity after getting them fitted, the overall treatment experience, and durability also influence satisfaction levels. Studies have reported satisfaction rates ranging from 67% to 93%, with some cases achieving 100% (Zarow et al., 2023) (Alothman et al., 2018). One study compared satisfaction rates across different materials and found Porcelain veneers leading at 93.3%, followed by indirect composite (lab fabricated Composite) at 82% and direct composite at 67% (Mazzetti et al., 2022). Although there appears to be a preference for Porcelain, an- other study revealed no significant difference in patient responses to composite versus porcelain veneers (Gresnigt et al., 2021).

These findings emphasize the importance of aesthetics and the need for open communication between dentists and patients to understand individual preferences. The decision between porcelain and composite veneers presents a trade-off. Porcelain veneers offer outcomes catering to patients looking for a minimally invasive solution. However, their application often involves removing some tooth enamel. Although composite veneers offer some advantages, such as being more preservative of tooth structure and providing a cheaper alternative, they come with drawbacks, such as the difficulty of mimicking the exact color of teeth. Specifically, this process primarily aims to cover anterior teeth, which are closely associated with appearance. In this scenario, the dentist's expertise is important in selecting the best material for the patient while respecting the patient's autonomy and considering other factors such as patient preference and the patient's ability to pay. Another important factor is the effect of veneer thickness on the patient's ability to pronounce certain letters, especially “z” and “s”. This effect on pronunciation ultimately has a significant impact on overall patient satisfaction. For example, a study showed that the thickness of different materials can affect patient satisfaction regarding crowns and dentures (Jurado et al., 2024).

Another factor that affects satisfaction is longevity; many patients may have an initially positive experience but have issues such as chipping or damage to the veneers several months later due to lack of maintenance and the nature of the material itself. In this scenario, the dentist's expertise can again guide patients on the nature of their veneers and how various factors, such as the type of food (sticky, hard, or abrasive), can affect these veneers. Additionally, the use of correct luting agents and bonding systems can provide

optimum longevity for the selected veneers. One study indicated that Porcelain restorations had a surprisingly low failure rate of less than 5% after five years (Araujo et al., 2016). Main reasons for this failure include chipping and discoloration, mechanical problems such as wear and tear, concerns with the gum tissue around the restoration, loss of adherence due to bonding, and tooth decay and fractures. Research has indicated survival rates for porcelain veneers ranging between 91% and 96% after ten to twenty years (Lay- ton et al., 2012). While these figures are reassuring, some studies have highlighted the importance of maintenance and dental check-ups to extend the lifespan of porcelain veneers. On the other hand, composite veneers show a lower success rate compared with porcelain. Reports have suggested a 75% survival rate after a decade compared with 100% for porcelain veneers (AlJazairy., 2021).

Moreover, research indicates that composite veneers may be more prone to issues such as color discrepancies, rough surfaces, chipping, and wear over time. A clinical trial (Gresnigt et al., 2013). Studied 46 patients to compare the survival rate of indirect resin composite laminate veneers and Porcelain veneers. The study found that all six failures observed were in the group with indirect resin composite veneers, consisting of three debonding cases and three fracture cases. The cumulative survival rate after 10 years for indirect resin composite and Porcelain veneers was 75% (with a range of 3.8%) and 100%, respectively ($p = 0.013$). Among the surviving 42 veneers, the variables “color match” ($p = 0.002$), “surface roughness” ($p = 0.000$), “fracture of the restoration” ($p = 0.028$), and “wear of the restoration” ($p = 0.014$) were significantly less favorable among the composite veneers.

To sum up, both porcelain and composite veneers offer opportunities for enhancing aesthetics and achieving satisfaction, while ensuring long-term durability. However, each material comes with its set of advantages and drawbacks. At the ready, porcelain veneers offer aesthetics, precise color matching, and lasting results but they may involve some removal of tooth enamel. On the opposite side, composite veneers are less invasive but may not match the same color or durability as porcelain. Choosing one of the two materials relies on the patient's preferences, the dentist's expertise, and the materials' qualities.

CHAPTER 3

METHODS

Sample Description

The Temple University database was used to select a total of 228 patients that have undergone a process of dental veneer at Temple University. After checking for completeness and accuracy, 63 patients were eliminated due to false information confirmed through phone calls with the patients themselves (they did not receive veneers). The information in the system was inaccurately presented, including the misuse of insurance codes to represent other procedures. Institutional Review Board (IRB) approval was obtained.

The main objective of this research was to assess the satisfaction of patients at Temple University associated with veneer material. To achieve this objective, several determinates, mostly focusing on four aesthetics, functionality, longevity, and satisfaction, were used to achieve this objective. The participants were invited to a quick questionnaire (on Qualtrics) that was specifically designed not to take more than 10 minutes. The inclusion criteria consisted of patients aged 18 years or older, proficient in English, and willing to engage in the study.

The exclusion criteria included individuals with medical or dental conditions that could potentially affect the study's outcomes, those undergoing orthodontic treatment, and those with cognitive or mental health issues that prevent them from giving informed consent or completing the survey. Before agreeing to participate in the survey, individuals were fully informed about the study's nature.

Research Design

The university's Institutional Review Board approved this study. The method of data collection involved creating a questionnaire consisting of 20 questions. These questions were designed to gauge patients' satisfaction with various aspects of their treatment, including aesthetic (appearance), speech ability, limitations on food consumption, longevity, level of involvement in decision-making, and other factors that may affect their satisfaction. The process began with making phone calls to the participants. After that, the script was read to the selected participants, giving them a brief introduction about the study and its objectives. The participants were informed that they were chosen based on certain criteria. After explaining the significance of the study and addressing any confidentiality concerns, the participants were informed about the study process and participation requirements.

Participants were asked to ask if they had any questions, and a script with various most-asked questions and appropriate answers was assembled to address any concerns the participants had. After the participants were asked whether they wanted to take the survey over the phone or through an alternative method. For those choosing an alternative method, a secure link to Qualtrics was sent to their email. After the participants selected their preferred method, verbal confirmation was obtained from them. They were also asked if they had any further questions before proceeding to the next step.

A series of 20 questions (Appendix A) were asked that assessed the various determinants of satisfaction such as the ability to eat and speak, aesthetic concerns, clinical experience, involvement in decision- making, and the ability to bite into an apple. After the participants finished answering the questions, they were asked if they had any questions or notes about the re-search. They were informed that an informed consent form would be sent to their email for them to read. Following that, the process of withdrawal and any associated burdens to them were explained and they were informed that they could withdraw from the study at any time without any consequences. Participants were informed that they would be contacted by email if they were selected to receive one of the five $100 gift cards as a result of their participation in the study.

Data Collection Instrument

A survey was conducted using Qualtrics which consisted of 20 questions to assess patients' satisfaction with various aspects of dental veneer treatment. The survey was

made available online for participants who could not complete it over the phone. The participants were asked to provide their email addresses for further communication. A page at the beginning of the survey provided a description of the study, its significance, and an acknowledgment of confidentiality preservation.

Data Analysis

The characteristics of the sample were assessed using descriptive statistics, such as mean, standard deviation, and frequencies. The survey questionnaires were assessed for the accuracy and completeness of the data collected. The study's outcome was determined by the "overall satisfaction" question (items 13-20), and the responses were di- vided into satisfied vs. unsatisfied, with the neutral response option included in the unsatisfied group for analysis purposes. Bivariate analyses, including Student's t-test, were used to investigate potential associations between overall satisfaction and treatment-specific factors. Specifically, the type of veneer (composite vs. porcelain) was examined as the exposure variable, with satisfaction as the outcome (yes/no).

Other factors related to veneer type (Items 1-12) and demographic characteristics were explored to determine their associations with the satisfaction outcome. Significant veneer variables and relevant demographic variables (e.g., age, and gender) with satisfaction as the outcome and veneer type as the primary exposure variable. A significance level of alpha = 0.05 was set.

CHAPTER 4

RESULTS

The recruitment process targeted 288 patients who were identified through dental records at TUKSoD as having veneers. Out of these, 61 participants agreed and provided verbal consent to join the study. The average age of participants was 52.21 years (SD = 19.61), with a range from 21 to 84 years. The majority of participants were female, constituting 68.9% of the sample. Overall, participants reported high levels of satisfaction with their dental veneers, with an average satisfaction score of 4.51 out of 5 (SD = 1.03), indicating a generally positive experience. When comparing satisfaction levels by veneer type, those with porcelain veneers (M
= 4.63, SD = 0.81) reported slightly higher satisfaction levels compared with those with resin veneers (M = 4.29, SD = 1.35). However, the difference was not significant (t = -1.232, p = 0.223). Analysis of individual item scores revealed minimal differences between resin and porcelain veneers. Satisfaction with color (resin: M = 4.52, SD = 0.87; porcelain: M = 4.42, SD = 0.87), natural appearance (resin: M = 4.43, SD = 0.81; porcelain: M = 4.70, SD = 0.65), and comfort with speech (resin: M = 4.62, SD = 0.92; porcelain: M = 4.78, SD = 0.58) showed no significant differences.

Participant demographics revealed that individuals with resin veneers were slightly older (M age = 56.29, SD = 20.62) compared with those with porcelain veneers (M age = 50.08, SD = 18.98); however, this age difference was not significant (t = 1.148, p = 0.243). Finally, logistic regression analysis did not reveal a significant association between veneer type and dichotomized satisfaction outcome (p = 0.610), suggesting that neither resin nor porcelain veneers significantly predicted overall satisfaction when considering a broader range of factors.

CHAPTER 5

DISCUSSION

Evaluating the aesthetics of dentition is a complex process. Patients opting for this procedure are especially conscious of the appearance of their teeth. Therefore, any restorative work is closely scrutinized and judged in relation to the overall appearance of their teeth. This scrutiny might explain why some patients are not completely satisfied with the outcome, particularly if it does not match their exact expectations. It is important to recognize that any changes to the dentition require a period of habituation. This is particularly true for veneers, which are often placed on anterior teeth and can significantly alter a patient's appearance. Patients may need time to adjust to the restoration material, adapt to the change, and perceive their dentition as a whole. Once the patient has adapted, a more reliable assessment of satisfaction can be achieved (Alothmanet al., 2018).

The sample population in this study included individuals of various ages, ranging from 21 to 84 years, with an average median age of 52.21 years. The distribution of ages was right- skewed, indicating that a significant portion of the participants were older. This likely reflects the demographic profile of individuals seeking dental veneer procedures at TUKSoD. However, it is important to acknowledge that this might raise concerns about the generalizability of the outcomes, as nationwide, most dental veneer recipients tend to be younger. This finding contrasts with existing literature, which suggests a higher prevalence of dental veneers among younger populations (Della Bona et al., 2010).

A study by (Choudhari et al., 2020) illustrated that the highest prevalence of dental veneer use can be found in young men aged 20-40, with 62.2%, compared with females at 37.8%. Coelho et al. 2015) evaluated 196 veneers in 86 adult patients (mean age 44 years) and reported that the majority of them were females (69.8%).

In another study by (Burke et al., 2009), 1,177 adult patients who had received porcelain veneers were identified, of whom 410 (35%) were male and 767 (65%) were female. Regarding satisfaction, this study revealed that patients generally had a positive experience with both porcelain and composite materials. While there was a slight preference for porcelain, the difference in satisfaction scores between porcelain veneers and resin veneers was not significant. These results are in line with a previous study by (Mei- jering et al., 2008), which showed that 93.3% of patients were satisfied with Porcelain materials, compared with 82% for indirect composite materials and 67% for direct composite materials.

From these findings, it can be concluded that patients appear to prefer Porcelain materials over other options. The findings of this research indicate that Porcelain veneers slightly outperform other types of veneers in terms of speech clarity for patients. These findings are consistent with those of (Chasin, 1995), who observed that Porcelain veneers minimally affect pronunciation compared with crowns or dentures.

In terms of comfort while eating different foods, this study found that porcelain was the preferred option. However, the results of this study may not apply to all patients and were not significant. The study also revealed no significant difference in the natural appearance of teeth with either composite or Porcelain veneers, although there was a

slight preference for Porcelain (Guess et al., 2008).

As for longevity, patients tended to trust porcelain veneers more, but once again, the results were not significant. This finding is in line with the findings of where the survival rate of 163 veneer restorations was 97.5%, with only four failures attributed to debonding and fractures. Another study by (Gresnigt et al., 2021), which spanned ten years and compared the survival rates of indirect composite and Porcelain veneers, found that Porcelain veneers had a higher survival rate. Additionally, a retrospective study in England evaluated Porcelain veneers in general dental service and found that 53% of the 2,562 placed Porcelain veneer restorations survived without re-interventions (Burke et al., 2009).

The findings of this study highlight the significance of considering individual preferences, clinical suitability, and functional outcomes when deciding on and administering dental veneer treatments. Patients of all ages and genders can experience high levels of satisfaction with both resin and porcelain veneers. Dental practitioners can improve patient outcomes and satisfaction with dental veneer procedures by prioritizing a patient-centered approach and focusing on comprehensive treatment planning.

CHAPTER 6

LIMITATIONS

The study had several limitations. First, the sample size was small and not truly representative of the satisfaction of veneers in the general population, so the outcomes of this study cannot be generalized. Second, the satisfaction scores exhibited a restricted range, which affected the statistical analysis and hindered the detection of differences in satisfaction between veneer materials. Third, patients may have had difficulty comprehending the questions due to low oral health literacy and unfamiliarity with specific terms, despite efforts to simplify and explain all terms used. Fourth, some patients might have been reluctant to provide honest responses due to fear of exposure to the clinic, although they were assured that their information would be kept confidential and de-identified. Additionally, the study was unable to establish causality due to its design. Furthermore, there might be a selection bias, as patients were selected from the Temple University Axium databases.

CHAPTER 7

CONCLUSION

This study was conducted at TUKSoD to investigate patient satisfaction with porcelain and composite dental veneers. A total of 288 patients were identified from dental records and contacted by phone, of which 61 consented to participate. The average age of participants was 52.21 years, with an age range of 21 to 84 years, and the majority were female, constituting 68.9% of the sample. Participants reported high levels of satisfaction with their veneers, with an average of 4.51 out of 5, which indicates a positive experience. Although satisfaction levels were higher for porcelain veneers (M = 4.63) compared with resin veneers (M = 4.29), this difference was not significant. Similarly, satisfaction with color, natural appearance, and speech showed no significant disparities between Porcelain and composite materials.

However, the findings of this study should be interpreted with caution due to limitations such as a small sample size and selection bias. These limitations may have influenced the statistical analyses and affected the ability to detect potential differences between veneer types. Therefore, further research with larger sample sizes and more comprehensive measures is necessary to gain a more accurate understanding of the factors influencing patient satisfaction with dental veneers.

1 Table 1 Sample characteristics

	Whole Sample	Resin (21)	Porcelain (40)	T test	P value
Age	52.21 (19.61)	56.29 (20.62)	50.08 (18.98)	1.179	0.243
Gender: Female	42 (68.9%)	15(71.4%)	27 (67.5%)		
Male	19 (31.1%)	6 (28.6%)	13 (32.5%)		
By Overall	4.51 (1.03)	4.29 (1.35)	4.63(0.81)	-1.23	0.223
By color	4.46 (0.87)	4.52 (0.87)	4.42 (0.87)	0.420	0.676
By Natural Appearance	4.61 (0.71)	4.42 (0.65)	4.70 (0.81)	-1.423	0.160
By ability to eat comfortably	4.88 (1.26)	4.74 (1.41)	4.90 (1.19)	-0.431	0.939
By Ability to speak	4.72 (0.71)	4.62 (0.92)	4.78 (0.58)	-0.707	0.420
By longevity	4.54 (0.92)	4.33 (1.24)	4.65 (0.70)	-1.279	0.206

Table 2 Satisfaction by gender

	Male	Female	T-test	P- value
Overall Satis-faction	4.58 (0.69)	4.48 (1.15)	-0.359	0.721
By color	4.37 (1.07)	4.50 (0.77)	0.545	0.588
By Natural Appearance	4.59 (0.66)	4.63 (0.83)	-0.168	0.868
By ability to eat comfortably	4.68 (0.94)	4.92 (0.34)	1.485	0.143
Ability to Speak	4.58 (0.76)	4.79 (0.68)	-1.42	0.159
By Longevity	4.79 (0.42)	4.43 (1.06)	1.007	0.322

Table 3 Satisfaction by age

Under 50		Over 50	T-test	P- value
Overall Satisfaction	4.50 (1.25)	4.51 (0.869)	-0.50	0.960
By color	4.37(1.05)	4.51 (0.73)	-0.606	0.547
By Natural Appearance	4.50 (0.89)	4.68 (0.57)	-0.938	0.352
bility to eat comfortably	5.00 (1.29)	4.75 (1.25)	1.563	0.123
By Ability to Speak	4.71 (0.91)	4.73 (0.56)	-1.14	0.910
By Longevity	4.42 (1.17)	4.62 (0.72)	-0.845	0.402

Table 4 Satisfaction analysis

	Not satisfied	Satisfied	P. value
Frequency	16	45	
Percentage	26.2%	73.8%	
Resin	6 (28.6%)	15 (71.4%)	
Porcelain	10 (25%)	30 (75%)	0.763

Figure 1 Overall satisfaction

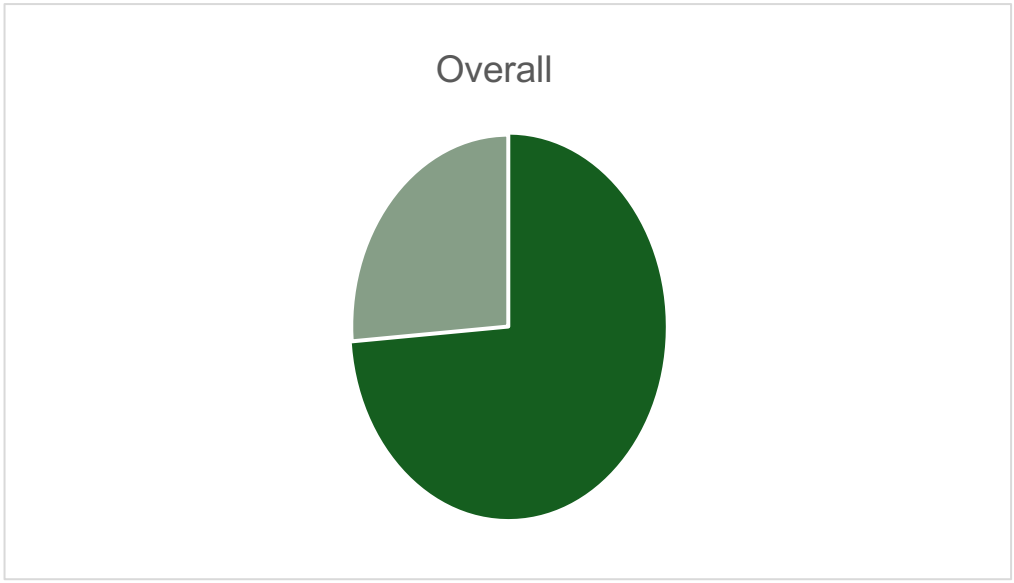


Figure 2 Satisfaction by material (Composite vs. Porcelain)

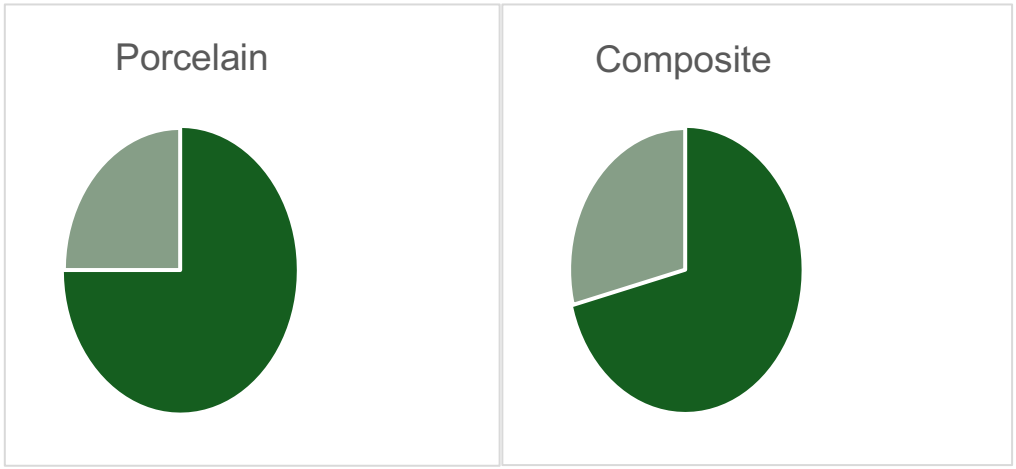
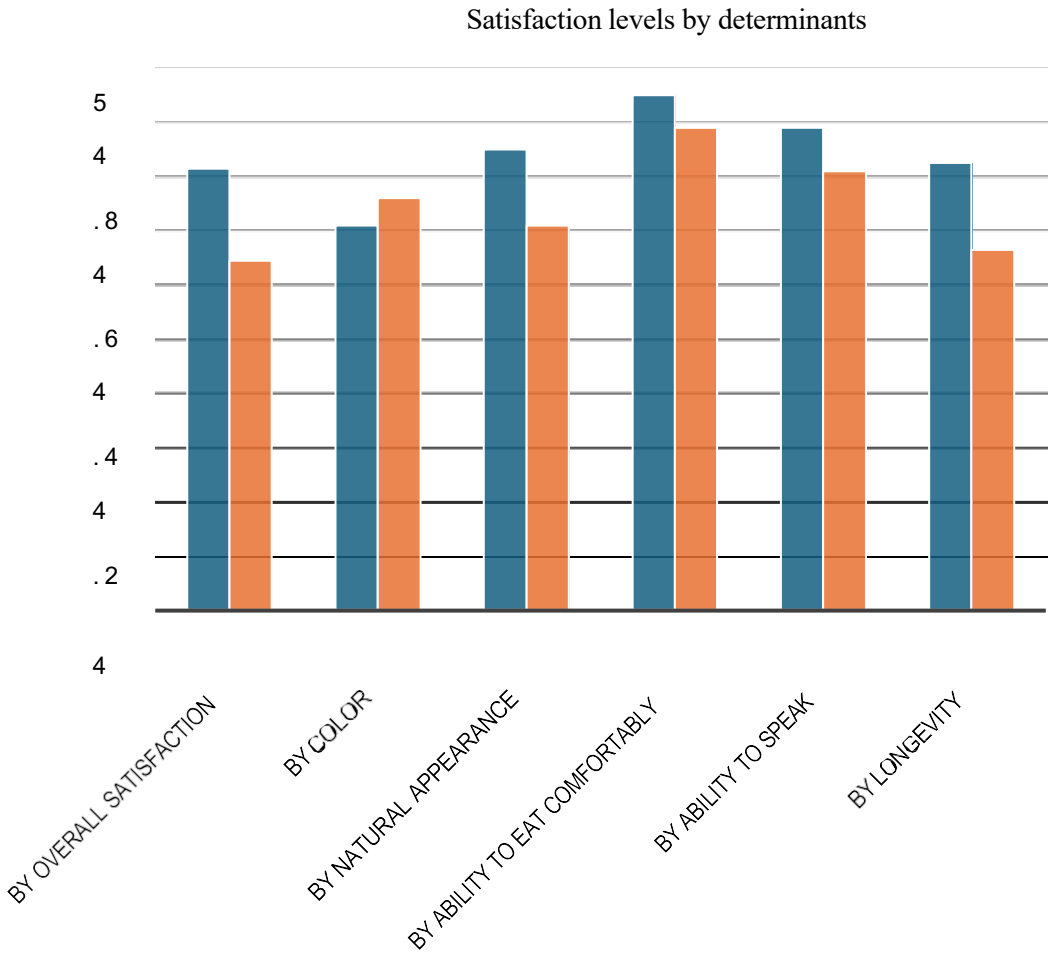


Figure 3 Satisfaction levels by determinant of satisfaction.



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APPENDIX A

SATISFACTION SURVEY

Aesthetic*:*

1. On a scale of 1 to 5, how satisfied are you with the color of your dental veneers?

a. Very Dissatisfied
b. Dissatisfied
c. Neutral
d. Satisfied
e. Very Satisfied

2. On a scale of 1 to 5, how important is the color change for you when considering den- tal veneers?

a. Not Important
b. Slightly Important
c. Neutral
d. Important
e. Very Important

3. If you answered "Yes" to the previous question, please specify the location of the color change:

a. Around the edges
b. Overall

4. Do your dental veneers look natural, or do they appear fake?

a. Completely Fake
b. Mostly Fake
c. Neutral
d. Mostly Natural
e. Completely Natural Function*:*

5. On a scale of 1 to 5, how important is it for your dental veneers to allow you to eat comfortably?

a. Not Important
b. Slightly Important
c. Neutral
d. Important
e. Very Important

6. Are there any limitations on the types of food you can eat due to your veneers?

a. Yes
b. No

7. If you answered "Yes" to the previous question, please specify the type of food:

a. Hard Foods
b. Sticky or Chewy Foods
c. Staining Foods and Beverages

8. On a scale of 1 to 5, how satisfied are you with your ability to bite into an apple with your dental veneers?

a. Very Dissatisfied
b. Dissatisfied
c. Neutral
d. Satisfied
e. Very Satisfied Longevity*:*

9. On a scale of 1 to 5, how important is it for your dental veneers to last for a long time?

a. Not Important
b. Slightly Important
c. Neutral
d. Important
e. Very Important

10. Are you confident that your dental veneers will stay strong and durable for a long pe- riod?

a. Yes
b. No

11. Have you experienced any chipping or damage to your dental veneers?a.

a. Yes

b. No

12. Do you think your dental veneers will require repairs or adjustments in the future?

a. Yes
b. No

Satisfaction:

13. Are you satisfied with the overall appearance of your veneers?

a. Yes
b. No

14. On a scale of 1 to 5, how satisfied are you with the longevity (lastingness) of your dental veneers?

a. Very Dissatisfied
b. Dissatisfied
c. Neutral
d. Satisfied
e. Very Satisfied

15. On a scale of 1 to 5, how satisfied are you with the natural appearance of your dental veneers?

a. Very Dissatisfied
b. Dissatisfied
c. Neutral
d. Satisfied
e. Very Satisfied

16. On a scale of 1 to 5, are you satisfied with the functionality of your dental veneers when it comes to eating?

a. Very Dissatisfied
b. Dissatisfied
c. Neutral
d. Satisfied
e. Very Satisfied

17. On a scale of 1 to 5, how satisfied are you with your overall experience of having dental veneers?

a. Very Dissatisfied
b. Dissatisfied
c. Neutral
d. Satisfied

e. Very Satisfied

18. Did you receive the exact type of veneers that you initially preferred?

a. Yes
b. No

19. If given the chance, would you choose an alternative treatment if it were available?

a. Yes
b. No

20. Would you recommend dental veneers to others?

a. Yes
b. No