

ASSOCIATION OF AGE AND GENDER IN PATIENTS UNDERGOING VENEERS FOR DISCOLORED UPPER ANTERIOR TEETH- A RETROSPECTIVE ANALYSIS

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ABSTRACT

Veneer is a layer of tooth coloured material that is applied to a tooth to restore localized or generalized defect and intrinsic discolorations. The composite veneers are direct tooth colored restorative materials placed over the surface of the tooth. The ceramic veneers are the lab processed or indirect veneers. They have good esthetic value due to translucency and tend to mimic the appearance of natural teeth. This study was done to derive an association between age and gender in patients undergoing veneer treatment for discoloured upper anterior teeth. A total of 168 case sheets of patients with veneer treatment done for upper anterior teeth were reviewed and analyzed. The patients undergoing veneer treatment with direct composites and indirect laminates for discoloured upper anterior teeth were included for the study. The population selected for the study was in the age group of 18-65 years. The most commonly treated upper anterior teeth for veneer treatment was also analyzed. Data was tabulated using excel sheets. The ratio of male and female patients choosing veneer as a treatment option was calculated. The type of veneer most commonly preferred was derived. The association between age and gender in the choice of veneer treatment was statistically analyzed using SPSS software. Out of 168 teeth, 105 (62.5%) were male and 63 (38.1%) female patients. Most of the people of both genders, who have chosen veneer treatment, were in the age group of 18-30 years which was not statistically significant ($p > 0.05$). 145 (86.3%) patients have undergone composite veneer treatment, whereas only 23 (13.9%) patients opted for ceramic veneers. Within the limitations of the study, maxillary central incisors with composite veneers were commonly observed in the age group of 18-30 years. There was significant association between age and veneer treatment and composite veneers was more preferred as a treatment option by patients of both genders.

KEY WORDS

Ceramic veneer; Composite veneer; Laminate veneers; Maxillary anteriors; Veneers.

INTRODUCTION

With the advent in advances in adhesive technology, veneers have become the esthetic treatment modality that is more predictable, less invasive, good longevity and excellent clinical performance (Nelson, 2018). Composite veneers have good aesthetic results when appropriate care selection is done, treatment done under strict isolation, proper shade selection and good oral hygiene practices to avoid staining (Matysa, Matysa and Więckiewicz, 2017). Laminate veneers have better translucency, longevity and glazed surfaces that do not stain easily (D and Hadyaoui, 2018).

Two types of materials are indicated for the translucency and potential to be used in small thickness: sintered feldspathic porcelain and pressable ceramic (Peumans *et al.*, 2000). Ceramic veneers can be milled using CAD-CAM technique (Donovan, 2008). Nevertheless function, form and esthetics are adequately restored in direct procedures with composite resins which are done in one or two visits with the restorative conception in close relation to conservative operative interventions (Nahsan *et al.*, 2012).

The aim of this study was to evaluate the cases of composite and porcelain veneers and to derive an association between age and gender in patients undergoing veneer treatment for discoloured upper anterior teeth. Also the most commonly treated teeth and type of veneer was evaluated.

Materials and methods

This comparative Retrospective study was conducted at Saveetha dental college in 2020. Case sheets were analyzed from 1st June 2019 to 31st March 2020. The case sheets and patient details were obtained from the dental record management system database which chronologically has all the patient details, treatment done and their follow up visits information. The ethical approval number was SDC/SIHEC/2020/DIASDATA/0619-0320.

A total of 168 case sheets of patients undergoing veneer treatment for discoloured upper anterior teeth were evaluated, reviewed and analyzed. The case sheets were cross verified by another examiner to avoid missing any data. The age, gender, the treated teeth, type of veneer (porcelain/composite) were checked by data evaluation and photographs. The patients in the age group of 18-65 years of age only were included in the study. Teeth treated with veneers for composite and porcelain were included in the study.

Sampling bias was minimized by verifying photographs and age groups. Incomplete data was verified from concerned patient case sheets or departments. Gross incomplete data case sheets were excluded as it affects the accuracy of results of the study. The data were tabulated in Excel sheets.

Statistical Analysis

Statistical analysis was done using SPSS software. The independent variable assigned to be age and gender and dependent variable were upper anterior teeth with porcelain/composite veneers. The statistical test used to check the significance of association was Chi square test. The type of analysis performed was associative and descriptive using SPSS software (SPSS Version 21.0, SPSS, Chicago, IL, USA). Only p values less than 0.05 were considered to have statistical significance.

Results and Discussion

Out of 168 teeth, 105 patients (64%) belonged to the age group of 18-30 years of age (p value – 0.72%) (Table 1, Fig 1). Thus there was no significant association between age and veneer treatment in maxillary anteriors, $p > 0.05$ (Table 2).

A total of 165 case sheets were evaluated out of which, 102 (62.5%) were male and 63(38.1%) were female patients (Table 3, Fig 2). But there was no statistical significance in association between gender and patients undergoing veneer treatment for maxillary anteriors (Table 2)

145 patients (86.3%) have undergone composite veneer treatment, whereas only 23 (13.9%) patients opted for ceramic veneers. (Table 5). The maxillary central incisor was most commonly veneer treated teeth (50%) followed by lateral incisor (30.3%) and maxillary canines (19.6%) (Fig 3). There was no significant difference between type of teeth and the veneer treatment done (Table 6).

Veneers are minimally invasive restorations to correct abnormalities, esthetic deficiency and fluorosis discoloration (Parmar, 2019). It is a great alternative to full coverage crown in young patients and patients with healthy dentition (Goldstein *et al.*, 2018). The indications of direct composite veneers include discoloration of teeth or restorations, dental malformations or malposition, diastemas, crown fracture, abrasive or erosive defects (Albers, 2002).

Composite resin material is directly placed over the prepared tooth surface. Low cost, reduced number of appointments, reversibility of treatment and no necessity for additional adhesive cementing systems are some of the advantages of direct composite veneers (Hemmings, Darbar and Vaughan, 2000), (Souza, 2018). Intraoral polishing of direct laminate veneers is easy and any crack or fracture of the restoration can be repaired intra orally and marginal adaptation is better than indirect laminate veneers(12). However the disadvantages of direct laminate veneers are low resistance to wear, discoloration and fracture (Burke *et al.*, 2019).

Indirect veneers are made of porcelain/ ceramic, have high resistance against fracture, attrition and discoloration (Aschheim, 2015). However increased number of visits, higher cost and use of adhesive cementing systems are main disadvantages of porcelain veneers.

The appropriate case and material selection based on the patient's socioeconomic status, esthetic expectations and oral hygiene conditions (Ravinthar and Jayalakshmi, 2018).

This was the first kind of study done to study the association between age and gender in patients undergoing veneer treatment for maxillary anteriors.

Zoric et al, did a study to assess level of patient's satisfaction with appearance of maxillary anterior restorations and concluded that women are more dissatisfied with general impression of their restorations than men (Zorić, Žagar and Zlatarić, 2014).

Willershausen et al, did a study to evaluate the influence of gender and social factors on oral health, treatment degree and choice of dental restorative material in patients from a dental school. The conclusions of his study were, the female patients had significantly higher percentage of restoration (crown and tooth coloured fillings) compared to men, patients well educated opted for expensive restorations and patients with private health insurance showed lower level of carious lesions (Willershausen *et al.*, 2010). This study was contrary to our study, where the male patients were highest to undergo veneer treatment. But the result was not statistically significant in our study.

Lajnert et al, studied the influence of age and maxillary anterior teeth status on patient's satisfaction with dental appearance and tooth color and concluded that it varied among individuals of different age and dental status. Younger people were moderately satisfied with composite restoration (45-51%) whereas older patients (70%) were not satisfied(Lajnert *et al.*, 2012).

Friedman et al did a critical review on randomized clinical trials comparing direct and indirect veneers on anterior teeth. 6 articles met all inclusion criteria but only one study by Meijering and colleagues(1998) met all requirements of study. In a 2 year recall of that study the overall survival rates were 94% for porcelain, 90% indirect composite and 74% for direct composite veneers. The survival rate was higher when the incisal

edge was reduced. The patient's satisfaction rates were 93% for porcelain, 82% for indirect composite and 67% for direct composite (Meijering *et al.*, 1998).

Friedman concluded that there was very less reliable evidence comparing direct and indirect veneers. The choice between direct and indirect veneers should be made based on the patient's factors and clinician's experience ('Direct versus Indirect Veneer Restorations for Intrinsic Dental Stains', 2006). Although porcelain veneers have better characteristics, composite veneers were more commonly opted by patients in our study. This might be due to cost factor and reduced number of visits (Recen, Önal and sebnem Turkun, 2019).

The younger age group of 18-30 years mostly preferred veneer treatment since they are very concerned about their smile and ready to enhance their dental esthetic value with veneers. Most commonly treated teeth were maxillary central incisors.

The limitations of this study include a very small sample size and population studied. Also, statistics should be done to assess the significance of choice of type of veneer opted by male and female patients of all age groups.

Early carious lesions may be seen as demineralised white chalky spots which might be commonly masked by veneers and prevents progression of caries. This avoids painful procedures like root canal treatment which involves meticulous cleaning and shaping with irrigant activation techniques (Ramamoorthi, Nivedhitha and Divyanand, 2015), (Siddique and Jayalakshmi, 2019; Siddique *et al.*, 2019), (Noor, S Syed Shahaab and Pradeep, 2016).

Proper history taking and pulp vitality diagnostic tests are necessary to decide treatment plan for the teeth (Janani, Palanivelu and Sandhya, 2020). The other treatment for white spot lesions include use of remineralising bioactive agents that favour the calcium phosphate replenishment (Rajendran *et al.*, 2019), (Nasim and Nandakumar, 2018). Veneers may be beneficial for discolored teeth due to trauma, where the tooth is calcified completely or asymptomatic. It can also be used to esthetically correct Ellis class 2 fractures. In many cases of trauma, pulp undergoes necrosis that discolors the tooth.

Previously our team had conducted clinical trials,(Nasim *et al.*, 2018), in vitro studies (Ramanathan and Solete, 2015), (Ramesh, Teja and Priya, 2018), KAP surveys (Manohar and Sharma, 2018), (Jose, P. and Subbaiyan, 2020) and reviewed (Teja and Ramesh, 2019),(Kumar and Delphine Priscilla Antony, 2018), (R, Rajakeerthi and Ms, 2019) various aspects of Endodontics and Conservative dentistry over the past 5 years. Now we are focussing on epidemiological surveys. The idea for this survey stemmed from the current interest in our community towards minimally invasive dentistry. With advanced veneer materials and bonding strategies, veneers is the most conservative option to treat discolored anterior teeth (Ravinthar and Jayalakshmi, 2018).

Conclusion

Within the limitations of the study, maxillary central incisors with composite veneers were commonly observed in the age group of 18-30 years. There was no significant association between age, gender and type of veneer treatment done in maxillary anterior teeth. Also, composite veneers were more preferred as a treatment option by patients of both genders. With advancements in tooth colored materials and techniques, veneers are a minimally invasive treatment option for treating mild to moderate discolorations in teeth.

Author contributions

Category 1

Conception and design of study: Dr Swarna¹, Dr Subash Sharma²

Acquisition of data: Dr Swarna¹

Analysis and/or interpretation of data: Dr Swarna¹, Dr Subash Sharma², Dr Haripriya³

Category 2

Drafting the manuscript: Dr Swarna¹, Dr Subash Sharma²

Revising the manuscript critically for important intellectual content: Dr Subash Sharma², Dr Haripriya³

Category 3

Approval of the version of the manuscript to be published (the names of all authors must be listed):

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All the authors have discussed the results among themselves and contributed to the final manuscript.

Conflict of interest

There is no conflict of interest in this study

References

- [1] Albers, H. F. (2002) *Tooth-colored Restoratives: Principles and Techniques*. PMPH-USA.
- [2] Aschheim, K. W. (2015) 'Porcelain laminate veneers restorations', *Esthetic Dentistry*, pp. 124–157. doi: 10.1016/b978-0-323-09176-3.00016-4.
- [3] Burke, F. J. T. *et al.* (2019) 'Survival rates of resin composite restorations in load bearing situations in posterior teeth', *Dental Update*, pp. 524–536. doi: 10.12968/denu.2019.46.6.524.
- [4] D, H. and Hadyaoui, D. (2018) 'Ceramic Veneers for Smile Optimization: A Multidisciplinary Approach', *Medical Journal of Clinical Trials & Case Studies*. doi: 10.23880/mjccs-16000132.
- [5] 'Direct versus Indirect Veneer Restorations for Intrinsic Dental Stains' (2006) *Journal of Esthetic and Restorative Dentistry*, pp. 111–113. doi: 10.2310/6130.2006.00019_2.x.
- [6] Donovan, T. E. (2008) 'Factors Essential for Successful All-Ceramic Restorations', *The Journal of the American Dental Association*, pp. S14–S18. doi: 10.14219/jada.archive.2008.0360.
- [7] Goldstein, R. E. *et al.* (2018) *Ronald E. Goldstein's Esthetics in Dentistry*. John Wiley & Sons.

- [8] Hemmings, K. W., Darbar, U. R. and Vaughan, S. (2000) 'Tooth wear treated with direct composite restorations at an increased vertical dimension: Results at 30 months', *The Journal of Prosthetic Dentistry*, pp. 287–293. doi: 10.1016/s0022-3913(00)70130-2.
- [9] Janani, K., Palanivelu, A. and Sandhya, R. (2020) 'Diagnostic accuracy of dental pulse oximeter with customized sensor holder, thermal test and electric pulp test for the evaluation of pulp vitality - An in vivo study', *Brazilian Dental Science*. doi: 10.14295/bds.2020.v23i1.1805.
- [10] Jose, J., P., A. and Subbaiyan, H. (2020) 'Different Treatment Modalities followed by Dental Practitioners for Ellis Class 2 Fracture – A Questionnaire-based Survey', *The Open Dentistry Journal*, pp. 59–65. doi: 10.2174/1874210602014010059.
- [11] Kumar, D. and Delphine Priscilla Antony, S. (2018) 'Calcified Canal and Negotiation-A Review', *Research Journal of Pharmacy and Technology*, p. 3727. doi: 10.5958/0974-360x.2018.00683.2.
- [12] Lajnert, V. *et al.* (2012) 'Influences of age and maxillary anterior teeth status on patient's satisfaction with dental appearance and tooth colour', *Gerodontology*, pp. e674–e679. doi: 10.1111/j.1741-2358.2011.00543.x.
- [13] Małysa, A., Małysa, R. and Więckiewicz, W. (2017) 'Aesthetic restoration of anterior section using Edelweiss standard composite veneers', *Prosthodontics*, pp. 70–75. doi: 10.5604/00331783.1233264.
- [14] Manohar, M. and Sharma, S. (2018) 'A survey of the knowledge, attitude, and awareness about the principal choice of intracanal medicaments among the general dental practitioners and non endodontic specialists', *Indian Journal of Dental Research*, p. 716. doi: 10.4103/ijdr.ijdr_716_16.
- [15] Meijering, A. C. *et al.* (1998) 'Survival of three types of veneer restorations in a clinical trial: a 2.5-year interim evaluation', *Journal of Dentistry*, pp. 563–568. doi: 10.1016/s0300-5712(97)00032-8.
- [16] Nahsan, F. P. S. *et al.* (2012) 'Clinical strategies for esthetic excellence in anterior tooth restorations: understanding color and composite resin selection', *Journal of Applied Oral Science*, pp. 151–156. doi: 10.1590/s1678-77572012000200005.
- [17] Nasim, I. *et al.* (2018) 'Clinical performance of resin-modified glass ionomer cement, flowable composite, and polyacid-modified resin composite in noncarious cervical lesions: One-year follow-up', *Journal of Conservative Dentistry*, p. 510. doi: 10.4103/jcd.jcd_51_18.
- [18] Nasim, I. and Nandakumar, M. (2018) 'Comparative evaluation of grape seed and cranberry extracts in preventing enamel erosion: An optical emission spectrometric analysis', *Journal of Conservative Dentistry*, p. 516. doi: 10.4103/jcd.jcd_110_18.

- [19] Nelson, D. (2018) 'What Are Veneers?', *Science Trends*. doi: 10.31988/scitrends.27874.
- [20] Noor, S. S. S. E., S Syed Shihaab and Pradeep (2016) 'Chlorhexidine: Its properties and effects', *Research Journal of Pharmacy and Technology*, p. 1755. doi: 10.5958/0974-360x.2016.00353.x.
- [21] Parmar, D. (2019) 'Minimally Invasive Direct Restoration of Worn Teeth: A Simplified Technique', *Dental Update*, pp. 388–395. doi: 10.12968/denu.2019.46.4.388.
- [22] Peumans, M. *et al.* (2000) 'Porcelain veneers: a review of the literature', *Journal of Dentistry*, pp. 163–177. doi: 10.1016/s0300-5712(99)00066-4.
- [23] Rajendran, R. *et al.* (2019) 'Comparative Evaluation of Remineralizing Potential of a Paste Containing Bioactive Glass and a Topical Cream Containing Casein Phosphopeptide-Amorphous Calcium Phosphate: An in Vitro Study', *Pesquisa Brasileira em Odontopediatria e Clínica Integrada*, pp. 1–10. doi: 10.4034/pboci.2019.191.61.
- [24] Ramamoorthi, S., Nivedhitha, M. S. and Divyanand, M. J. (2015) 'Comparative evaluation of postoperative pain after using endodontic needle and EndoActivator during root canal irrigation: A randomised controlled trial', *Australian Endodontic Journal*, pp. 78–87. doi: 10.1111/aej.12076.
- [25] Ramanathan, S. and Solete, P. (2015) 'Cone-beam Computed Tomography Evaluation of Root Canal Preparation using Various Rotary Instruments: An in vitro Study', *The Journal of Contemporary Dental Practice*, pp. 869–872. doi: 10.5005/jp-journals-10024-1773.
- [26] Ramesh, S., Teja, K. and Priya, V. (2018) 'Regulation of matrix metalloproteinase-3 gene expression in inflammation: A molecular study', *Journal of Conservative Dentistry*, p. 592. doi: 10.4103/jcd.jcd_154_18.
- [27] Ravinthar, K. and Jayalakshmi (2018) 'Recent Advancements in Laminates and Veneers in Dentistry', *Research Journal of Pharmacy and Technology*, p. 785. doi: 10.5958/0974-360x.2018.00148.8.
- [28] Recen, D., Önal, B. and sebnem Turkun, L. (2019) 'Clinical evaluation of direct and indirect resin composite veneer restorations: 1 year report', *Journal of Ege University School of Dentistry*, pp. 103–115. doi: 10.5505/eudfd.2019.66933.
- [29] R, R., Rajakeerthi, R. and Ms, N. (2019) 'Natural Product as the Storage medium for an avulsed tooth – A Systematic Review', *Cumhuriyet Dental Journal*, pp. 249–256. doi: 10.7126/cumudj.525182.
- [30] Siddique, R. *et al.* (2019) 'Qualitative and quantitative analysis of precipitate formation following interaction of chlorhexidine with sodium hypochlorite, neem, and tulsi', *Journal of conservative dentistry: JCD*, 22(1), pp. 40–47.

- [31] Siddique, R. and Jayalakshmi, S. (2019) ‘Assessment of Precipitate Formation on Interaction of Chlorhexidine with Sodium Hypochlorite, Neem, Aloe Vera and Garlic: An in vitro Study’, *Indian Journal of Public Health Research & Development*, p. 3648. doi: 10.5958/0976-5506.2019.04155.x.
- [32] Souza, E. (2018) ‘Clinical Application of Dental Composites for Direct Restorations’, *Dental Composite Materials for Direct Restorations*, pp. 305–319. doi: 10.1007/978-3-319-60961-4_19.
- [33] Teja, K. V. and Ramesh, S. (2019) ‘Shape optimal and clean more’, *Saudi Endodontic Journal*. Medknow Publications and Media Pvt. Ltd., 9(3), p. 235.
- [34] Willershausen, B. *et al.* (2010) ‘Influence of gender and social factors on oral health, treatment degree and choice of dental restorative materials in patients from a dental school’, *International Journal of Dental Hygiene*, pp. 116–120. doi: 10.1111/j.1601-5037.2009.00401.x.
- [35] Zorić, E. K., Žagar, M. and Zlatarić, D. K. (2014) ‘Influence of Gender on the Patient’s Assessment of Restorations on the Upper Anterior Teeth’, *Acta Stomatologica Croatica*, pp. 33–41. doi: 10.15644/asc48/1/4.

Tables and Graphs

Age	Composite Veneer	Ceramic Veneer	Total
18-30 years	87	20	107
31- 40 years	35	3	38
41- 50 years	7	0	7
>50 years	16	0	16
Total	145	23	168

Table 1 shows the association between Age and type of veneer treatment done in maxillary anterior teeth. 107 patients belonged to the age group of 18-30 years, 38 patients belonged to the age group of 31-40 years, 7 patients belonged to the age group of 41-50 years and 16 patients were above 50 years of age.

	Value	df	Asymptomatic Significance (2- sided)
Pearson Chi-square	6.993	3	.072
Likelihood ratio	10.088	3	.018
Linear- by-linear Association	6.389	1	.011
N of Valid cases	168		

Table 2 shows the association between Age and type of veneer treatment done in maxillary anteriors. According to Chi square test, $p = 0.072$. ($p > 0.05$) - statistically not significant.

Gender	Composite Veneer	Ceramic Veneer	Total
Male	88	17	105
Female	57	6	63
Total	145	23	168

Table 3 shows the association between Gender and type of veneer treatment done in maxillary anterior teeth. Out of 168 patients, 105 were male and 63 were female patients. 145 patients underwent composite veneers and 23 were treated with ceramic veneers.

	Value	df	Asymptomatic Significance (2- sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-square	1.481	1	.224		
Continuity Correction	0.971	1	.325		
Likelihood ratio	1.549	1	.213		
Fisher's Exact test				.255	.162
Linear- by-linear Association	1.472	1	.225		
No of Valid cases	168				

Table 4 shows the association between Gender and type of veneer treatment done in maxillary anteriors. According to Chi square test, $p= 0.224$ ($p>0.05$) - statistically not significant.

Tooth number	Composite Veneer	Ceramic Veneer	Total
Maxillary central incisors	70	14	84
Maxillary lateral incisors	45	6	51

Maxillary canines	30	3	33
Total	145	23	168

Table 5 shows the association between tooth number and type of veneer treatment done in maxillary anteriors. Out of 168 teeth, 84 were maxillary central incisors, 51 were maxillary lateral incisors and 33 were maxillary canines. 145 teeth were treated with composite veneers and 23 with ceramic veneers.

	Value	df	Asymptomatic Significance (2- sided)
Pearson Chi-square	1.381	2	.501
Likelihood ratio	1.421	2	.491
Linear- by-linear Association	1.338	1	.247
N of Valid cases	168		

Table 6 shows the association between Tooth number and type of veneer treatment done in maxillary anteriors. Chi square test, $p = 0.501$ ($p > 0.05$) - statistically not significant.

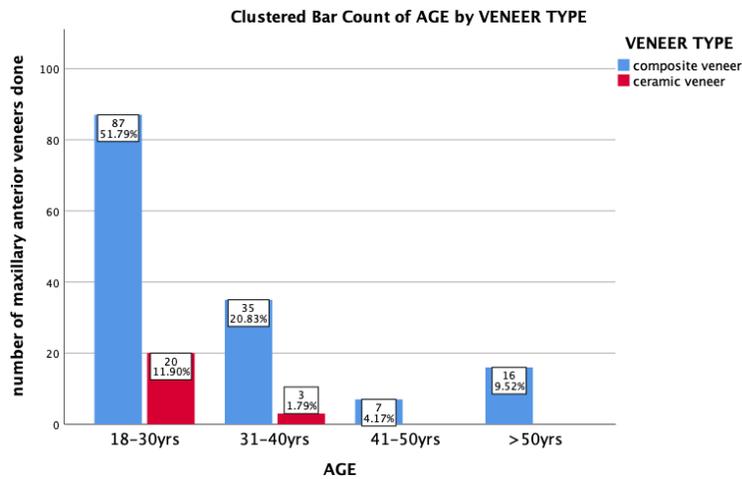


Fig 1: Bar chart depicting the association between Age and type of veneer treatment done in maxillary anteriors. X axis represents the age groups, Y axis represents the number of maxillary anterior veneers done. Blue color denotes composite veneer and red color denotes ceramic veneer. In all the age groups, 86% of patients preferred composite veneers and was more commonly performed than ceramic veneers. The maximum number of cases were performed in the age group of 18-30 years. Chi square test, $p=0.072$, ($p > 0.05$) statistically not significant.

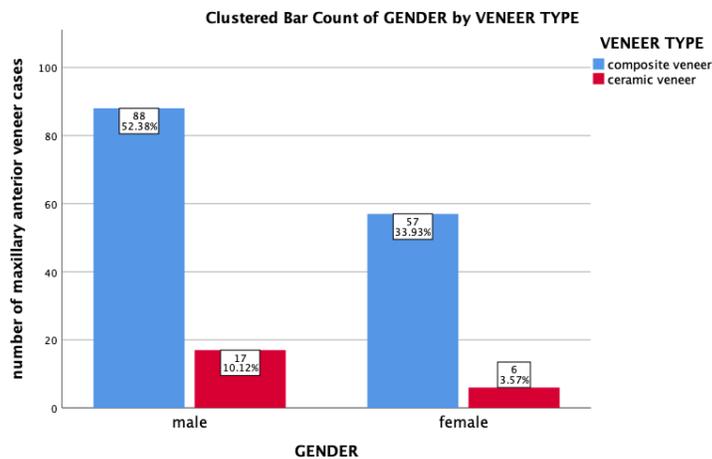


Fig 2 shows a Bar chart depicting the association between Gender and type of veneer treatment done in maxillary anteriors. X axis represents the gender, Y axis represents the number of maxillary anterior veneers done. Blue color denotes composite veneer and red color denotes ceramic veneer. In both genders, composite veneers were more commonly performed than ceramic veneers. 86.3% of patients were treated with composite veneers and 13.6% with ceramic veneers. According to Chi square test, $p=0.224$, showed no statistical significance ($p > 0.05$)

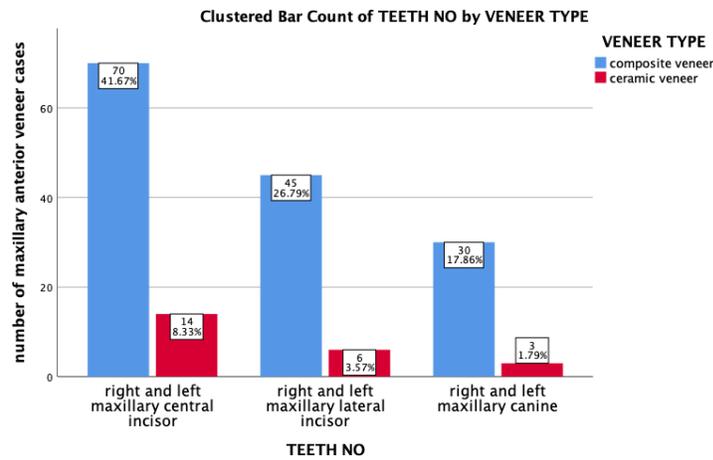


Fig 3 shows a Bar chart depicting the association between tooth number and type of veneer treatment done in maxillary anteriors. X axis represents the teeth, Y axis represents the number of maxillary anterior veneers done. Blue color denotes composite veneer and red color denotes ceramic veneer. 50% of maxillary central incisors, 30.3% of maxillary lateral incisors and 19.6% of maxillary canines were treated with veneers. According to Chi square test, $p=0.501$, showed no statistical significance ($p > 0.05$).