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## ASSOCIATION OF AGE AND GENDER OF PATIENTS UNDERGOING DIRECT VENEERING IN A UNIVERSITY HOSPITAL SETTING

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### ABSTRACT

Creating a natural dental appearance has become important in all fields of dentistry. Patients' expectations of appearance need to be given utmost importance as their satisfaction is very important. Dental materials thus used should match peoples natural teeth. A breakthrough in modern dentistry is the introduction of the veneers. The veneers are said to require very minimal preparation of the tooth to receive an esthetic restoration. The aim of the study is to evaluate the age and gender of patients undergoing direct veneering. A retrospective study was carried on with a sample size of 42 patients who underwent direct veneering in the university hospital, Chennai. The data was collected and verified. The age and gender of the patient was noted. Excel tabulation was done and the results obtained from SPSS version 19. Statistical test performed was the chi square test. From the data it is inferred that 52.38% of males and 47.62% of females underwent direct veneering. 14.28% of patients belong to age 22 and 11.9% to 24 years. Overall patients who reported were of age 14 years – 66 years. Among the patients who reported

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76.1% were young adults. 2.38% of them were children, 2.38% of them were older adults, 19% of them belonged to middle aged group adults. The p value=0.056 ( $p>0.05$ ) showing a non significant association between age and gender of patients who underwent direct veneering. It was concluded that mostly male patients underwent direct veneering than females and most of the population belonged to the age group of young adults followed by the middle aged adults, children and the older adults

**Keywords: Aesthetics; appearance; direct veneering; gender**

## INTRODUCTION

Beauty is the phenomena and of experiencing pleasure through the perception of balance [1]. A smile is one that tends to bring everything into balance. In the past, functional demands were the main considerations in dental treatment, but now, with decrease in caries prevalence, the focus has shifted towards dental aesthetics [2]. Colour, shape, structure and position abnormalities of anterior teeth might lead to esthetical problems [3]. Earlier technique used was covering the teeth with a dental crown [4]. However excessive preparation of the day leads to damage of adjacent/supporting structures [4, 5]. That's when dental veneers were introduced. Veneers with direct resins are one of the common treatment options for clinical applications following the developments in adhesive and restorative dentistry in recent times.

These restorations are applied on prepared tooth surfaces or even without any preparation, with an adhesive agent and a composite resin material directly in a single

visit in the dental clinic which makes it a comfortable and simple procedure [6]. The procedure of Direct composite veneers allows the operator to control and evaluate the entire procedure from shade selection to final morphology usually in a single appointment [7]. It is the most commonly utilized form of veneering. Laminate veneers are restorations which correct existing abnormalities with minimal preparation [8]. Since the 1930's dental veneers have been used to provide aesthetics and protection of the teeth [9].

Tooth discolouration, coronal fractures, malformation, [4, 5] Diastema or some of the indications of direct Veneers. However they are not much recommended in cases of fracture, attrition as they have no resistance to wear, Discolouration, and fracture [10]. This technique has an advantage where there is no requirement of an additional cement and ease of reversibility.

Analysing the age and gender of the patient helps to provide utmost satisfaction as the younger lot would generally report for

aesthetic cause [2] whereas others for a fracture or occlusal wear. Females generally tend to be less satisfied and are more sensitive than males regarding their appearance [11]. Direct veneer restoration, being a minimally invasive method with long-lasting functional and aesthetic success, is one of the most preferred treatment alternatives for restoration of anterior teeth, especially in young patients [12].

The challenges faced by other researchers were that the composite had a very low resistance to wear, discoloration and fracture incidence and also often it was reported that proper shade matching was a challenge faced that would influence the satisfaction of the patients. This is because most of the people reporting for the treatment are the younger adults who are very esthetically concerned [3].

The aim of the study was to evaluate the age and gender of patients undergoing direct veneering. The purpose was to identify the age groups that are requiring the treatment and the gender that most often reported with a complaint.

## **MATERIALS AND METHOD**

Study design and setting:

The study setting is university based single centered study. A retrospective study was conducted on 42 patients who visited a

Private Dental College with an aesthetic complaint, direct veneering was done for these patients. Thus the population includes patients who underwent direct veneering. The advantage of this study was the flexible data that could be obtained immediately and less expensively. The drawback of this study is that there were geographic limitations and the people involved were from an isolated population. The internal validity of the study was carried out by analysing the age and gender of patients who require direct veneering. The external validity was determined by the type of composite used.

### **Data collection**

The inclusion criteria was patients requiring Direct Veneering. The exclusion criteria was patients who didn't require treatment of Direct Veneering. The patient records were reviewed and analysed between June 2019 and March 2020 and the details of patients who had undergone direct veneering was noted. All available data was included to minimise sampling bias. Cross verification of details were done with the help of photographs. Patients of all age groups were included in this study. The data of age and gender of patients who underwent direct veneering was tabulated. Incomplete and censored data was excluded. Data was

entered in a methodical manner. Data was recorded and tabulated on Excel.

### Statistical Analysis

After Excel tabulation, the data was exported to IBM SPSS software [Version 19: IBM Corporation NY USA]. Descriptive statistics were used to calculate correlation between age and gender of patients who underwent direct veneering. The dependent variable was the treatment done which is direct veneering. The independent variables were age and gender. Pearson chi square test was done to statistically analyze the data. Pearson chi square test was used to identify any significant level of variation of association the significance level was set at 0.05

### Ethical Approval

The ethical approval for the retrospective study was obtained from the university (SDC/SIHEC/2020/DIASDATA/0619-0320).

### RESULTS AND DISCUSSION

From the graph it is seen that more males had reported than females I.e., 52.38% males and 47.62% females had undergone direct veneering [Figure 1]. It was also inferred that the age group of 14 to 66 had reported for treatment of direct veneering and most often, 76.1% of the patients who reported were young adults, 2.38% of them were children, 2.38% of them were older adults, 19% of them belonged to middle aged group

adults [Figure 2]. There are more male patients in the age group of 18-35 years, 19 patients (45.24%) in Figure 3.

Chi square test shows P value= 0.056 ( $p>0.05$ ) which is a statistically non-significant association, hence proving that there is no significant association between age and gender of patients who underwent direct veneering.

The retrospective study analyzed the gender and age of patients who had undergone direct veneering and it is seen that 52.38% of males and 47.62% females had reported for treatment. The study showed that 76.1% of younger adults [18–35 years] had reported mostly, 14.28% patients were of age 22 years and 11.9% were of age 24 years. Among the total, 2.38% of them were children [below 18 years], 2.38% of them were older adults [older than 55 years], 19% of them belonged to the middle aged group adults [36–55 years], which concludes that the younger adults more often report with aesthetics complaints. Pearson chi square analysis of patients who underwent direct veneering was performed. Asymptotic significance value obtained was 0.356. Chi square test thus shows  $p>0.05$  which is non-significant. In the study conducted by Vallittu *et al*, it was said that females always gave more importance for esthetic appearance [11]. zoric *et al* In his

study also states that females have more concern for aesthetics and tend to report more often [13]. Women often tend to be less satisfied with their dental appearance when compared to men as said by Seong *et al.* [14, 15]. Mehl *et al.* States that most of the older age people report for functional purposes, like presence of attrition or coronal fractures. It is thus seen that in general the older people tend to have more concerns and focus towards functional use [16].

In case of procedure like direct veneers, its limitation is low wear resistance which doesn't fulfil the need of the elderly individuals. The self esteem of the younger adults is often affected by their dental appearance more than it affects the older or middle aged adults. The study by Akarslan *et al* shows that ages 16 to 70 years reported and had undergone aesthetic correction and also states that females are more dissatisfied with their appearance [14]. Overall it is stated that the younger adults report more often with complaints, which is acceptable. Veneers when compared to crowns are considered much more conservative in terms of the requirements for preparation for restoring a tooth, they provide satisfactory, long-lasting esthetic results, only the facial surface is involved in veneer preparation, with the minimal preparation depth ranging

from 0.3 to 0.5 mm to maintain the all-enamel surface that is necessary for optimum bonding to the veneers [17]. In certain cases if the teeth are already compromised by the presence of extensive carious lesions, wear, old restorations or endodontic treatment, placement of a crown is the more prudent choice [18].

Veneers are a minimally invasive option for the treatment of discoloured and malformed teeth. The recent advancements in veneers and laminates in dentistry have given rise to an excellent alternative for a conservative approach of restoring a teeth. It closely resembles the natural teeth and hence has a very good aesthetic appearance. It's placement is a very minimally invasive procedure and hence is widely accepted by all patients. The recent advancements having good biocompatibility, high strength, durability and stain resistance has increased the demand for laminates in dentistry. However they do have some disadvantages that may include high cost, they cannot be used for malaligned teeth and have to be replaced every few years due to shrinkage which have to be taken into account for the future advancements being made in order to improve the quality of the treatment which is being provided and for the better aesthetics of the patient [19]. It is also said that veneers

consume a lesser amount of time for the treatment as compared to placement of crowns. Studies stated that 55.1% of the patients were dissatisfied with the color of their teeth, 42.7% with dental appearance, 29.9% with crowding of anterior teeth, 23.3% were hiding teeth when smiling, 16.1% were found to have non esthetic restorations and 11.9% thought that their anterior teeth were protruding. Esthetic restoration was found to be the most-performed treatment recently [29.0%] and whitening of teeth was the most-desired dental treatment [49.0%]. Gender, age and education level had an effect on satisfaction

and received previous and desired dental treatments for improvement of esthetics [14]. Just like how the advancements on veneers are being focused on, several other streams are also being focused on simultaneously by our research groups, mainly on various advancements about performing a successful root canal treatment and other advancements [20, 21]. Several plant based studies are also being carried on which has an impact on the longer run in the advancements in providing efficient treatments [22, 23] along with various in vitro studies belonging to this entity [24, 25].



Figure 1: The graph represents frequency distribution between the gender of patients undergoing direct veneering . X axis denotes the gender and Y axis denotes the number of patients. More males (red) had undergone direct veneering than females (blue).

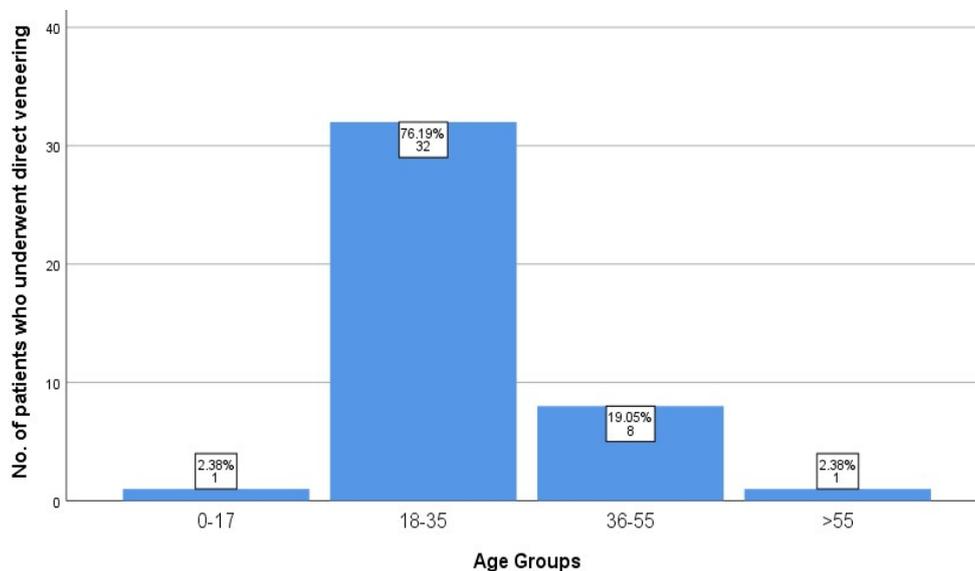


Figure 2: The graph represents frequency distribution of the age of patients undergoing direct veneering. X axis denotes the age of patients who had undergone direct veneering and Y axis denotes the number of patients. There were more patients in the age group of 18-35 years.

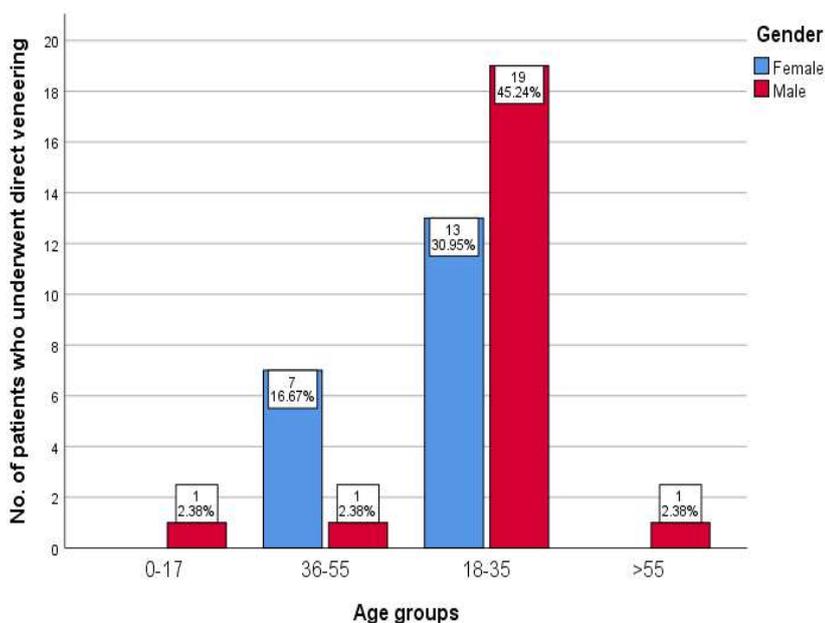


Figure 3: The graph represents association between the age and gender of patients undergoing direct veneering . X axis denotes the age group of patients who had undergone direct veneering and Y axis denotes the number of patients. There were more male (red) patients in the age group of 18-35 years than females (blue). Chi square test shows P value= 0.056 which is statistically non-significant, hence proving that there is no significant association between age and gender of patients who underwent direct veneering.

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## CONCLUSION

Within the limitations of the study it was seen that more males patients had undergone direct veneering than females. Among the total number of patients who underwent direct veneering, the maximum number of them were younger adults, followed by the middle aged adults, children and the older adults.

### Limitations

The study is performed in a different ethnic group of people which might alter the overall consensus with the previous studies and also the study can be conducted only among patients who report with an aesthetic complaint thus not generalised to all patients.

### Future scope

The study can provide betterment of clinical diagnosis and ease of treatment planning in order to fulfil the patients' needs in future.

## CONFLICT OF INTEREST

The authors have no conflict of interest.

## AUTHOR CONTRIBUTIONS

Preethi Mariona carried out the retrospective study, planning the study design, collection and analysis of data and drafted the manuscript. Dr. Surendar Sugumaran and Dr. Sreedevi Dharman aided in conception of the topic, supervision and appraisal of the manuscript.

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