DISTRIBUTION OF AGE AND GENDER FOR FIXED DENTAL PROSTHESIS AMONG PATIENTS IN A UNIVERSITY HOSPITAL SETTING- A RETROSPECTIVE STUDY

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ABSTRACT:

Fixed Dental Prosthesis is defined as a prosthetic application that is permanently attached to the remaining teeth,which replaces one or more missing teeth which is cemented to the natural tooth and its success depends on its ability to fulfill biological and patient evaluated objects with patient's satisfaction.The aim of this study was to find the distribution of Age and Gender for Fixed Dental Prosthesis among patients in a University Hospital setting. A retrospective cross-sectional study was carried out which included patient's details were collected by assessing the report from the data of 86,000 patients between June 2019 and March 2020 .The inclusion criteria were : Patient's name, age, gender and PID and Patient's who underwent Fixed Dental Prosthesis.From this we obtained 932 patients who underwent Fixed Dental Prosthesis.Data was tabulated in Excel and imported to SPSS.The type of statistical analysis used in this study was Correlation and Association. From this, we observed people of age range 31-40years received FPD at a higher rate (34.05%) and people of 20-30 years (26.96%), >50years (20.62%), 41-50yrs (18.37%) which was lesser comparatively.Males received FPD at a higher rate (53.60%) than females (46.19%) and transgenders (0.21%).The association between the gender and age of patients who received FPD was done by Chi square test (Chi-square value - 46.955[a]; P-value : 0.000). Since, P(<0.05) there was a higher significance between the age and gender of patients who received FPD.The prevalence rate of Fixed Dental Prosthesis was found to be 1% since out of 86,000 patients visited dental college 932 patients had Fixed Dental Prosthesis. This study shows that as age increases people show less preference for prosthetic restoration to replace missing teeth no matter what the reason, maybe. Steps should be taken to educate every possible patient about the importance of replacement of missing teeth since it can affect general health and can also cause damage to the adjacent tooth.

Keywords:

Esthetics; Cementation; Abutments; Edentulousness;Replacement.

1.INTRODUCTION:

Fixed Dental Prosthesis is the specialised area of dentistry which is involved in the replacement of missing teeth with a cast prosthesis permanently cemented in a place. The components are : Abutment

which acts as an attachment tooth to Fixed Dental Prosthesis,Pontic is the artificial tooth suspended from abutment teeth, Retainer is an extracoronal restoration cemented to the prepared abutment tooth, Connector is a rigid or non-rigid joint connection between the pontic and retainer[1]. Prosthodontic treatment is a common procedure for the elderly as tooth loss is reality in their old age. The profile of patient population seeking prosthodontic treatment is changing over time.[2]

The types of Fixed Dental Prosthesis includes, Resin-bonded bridges, PFM bridges, Screw retained and Cemented retained implant supported bridges,The aim of the fixed prosthodontic treatments are involved in restoring the function and mastication, restoring aesthetics, maintaining health and integrity of dental arches and supporting the treatment of problems related to Temporomandibular joint.[3]

The indications of Fixed Dental Prosthesis are : Missing of one or two adjacent teeth in the same arch , supportive healthy tissues, presence of suitable abutment teeth, good health of the patients [4,5]. The major contraindications associated with Fixed Dental Prosthesis are : Diseased or missing supportive tissues, absence of suitable abutment teeth, health issues, poor oral hygiene habits and if the patient is not affordable [6–10]. Types of Tooth supported Fixed Dental Prosthesis generally are : Inlay, Onlay,Porcelain Veneers , Full crown, Porcelain-fused-to-metal-crown, Fixed bridge, Resin bonded bridge [11,12,13,14,15]. Previously we had worked on [1617–22],this experience led us to work on knowing the distribution of age and gender for Fixed Dental Prosthesis.

The age influence on Fixed Dental Prosthesis as mentioned shows that as age increased willingness of the patient towards Fixed Dental Prosthesis has drastically increased[23]. Prosthodontics treatment is a very common procedure for the elderly as tooth loss is a reality in old age. Dentists usually take care of increasingly older patients with physiological age manifesting as cognitive impairment, frailty or multiple chronic disease or people who have side effects of medicine.[2425–28]. Previously our team conducted numerous surveys and clinical trials [29–36] over the past 5 years. This idea for our study stemmed from the current interest for our study.

Some studies [37]showed the gender influence on patients willing to have Fixed Dental Prosthesis. The variability may be influenced by ability to afford this type of treatment, accessibility of treatment and attitudes towards it. However, decision making for different patterns of tooth loss disproportionately affects people, and there is a need to achieve better clinical outcomes, which are also cost efficient. Epidemiological studies [38] have shown that, when life expectancy gradually increases, the percentage of elderly individuals with prosthodontic treatment in the population increases. Therefore, the aim of this study is to find out the incidence of age and gender for Fixed Dental Prosthesis.

2.MATERIALS AND METHODS :

2.1. Study Setting :

A retrospective study was carried out among patients in a University hospital setting. This is based on a university setting because data available was in the similar ethnicity with the particular geographic location. The trends in the other location that were not assessed in the study setting. Ethical approval was taken from the universal ethical committee. In total, three reviewers were involved to cross verify data.

2.2. Sampling :

The sample was collected from records with patients' data like : PID, name, age, gender and date of their first visit from June 2019 to April 2020 and tabulation was done in a chronological order using Excel. Case sheet review was done under examiner followed by cross verification.

The study sample size was 86000 where patients with Fixed Dental Prosthesis retrieved was n=932, out of which 500 were males, 430 were females and remaining 2 were transgenders. Statistical method used in

this study was the Chi-Square test and the software was SPSS by IBM. Patients with a Fixed Dental Prosthesis were considered as dependent variables and their age and gender were considered as a definite variable. The type of analysis used was Correlation and association which is a descriptive type of data analysis.

3.RESULTS AND DISCUSSION:

In the study, we observed people of age range 31-40years received FPD at a higher rate (34.05%) and people of 20-30 years (26.96%), >50years (20.62%), 41-50yrs (18.37%) which was lesser comparatively (Figure - 1). Males received FPD at a higher rate (53.60%) than females (46.19%) and transgenders (0.21%) (Figure-2). The association between the gender and age of patients who received FPD was done where in the age range of 20-30years, males(blue) received FPD at a higher rate (18.05%) than females (green) (8.70%) and transgenders (yellow) (0.21%). In the age range of 31-40 years 19.33% were males (blue) and (14.72%) were females (green). In the age range 41-50years males (blue) were (7.63%) and females (green) (10.74%) which was higher. In the age range >50 years males (blue) were (8.59%) and females (green) were (12.03%). The prevalence rate of Fixed Dental Prosthesis was found to be 1% since out of 86,000 patients visited dental college 932 patients had Fixed Dental Prosthesis.

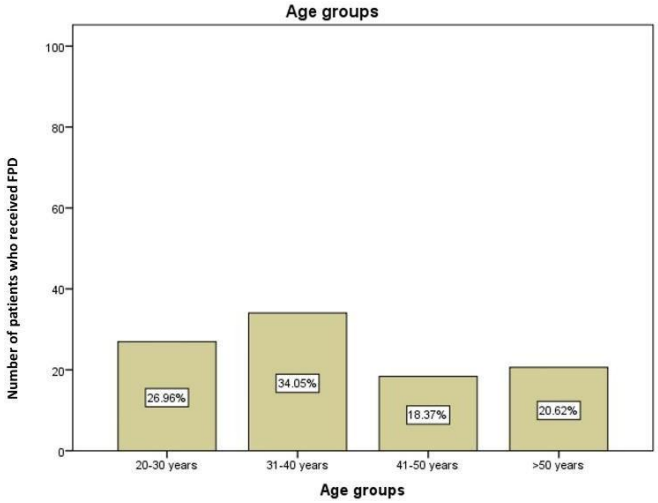

Figure-1 shows the bar graph of distribution of age among people who were delivered with FPD. The age group of patients were mentioned in X-axis which were categorized as 20-30years ,31-40years, 41-50years and >50years and the number of patients who were delivered with FPD were mentioned in Y-axis. Of these, people of age range 31-40years received FPD at a higher rate (34.05%) and people of 20-30 years (26.96%), >50years (20.62%), 41-50yrs (18.37%) lesser comparatively.

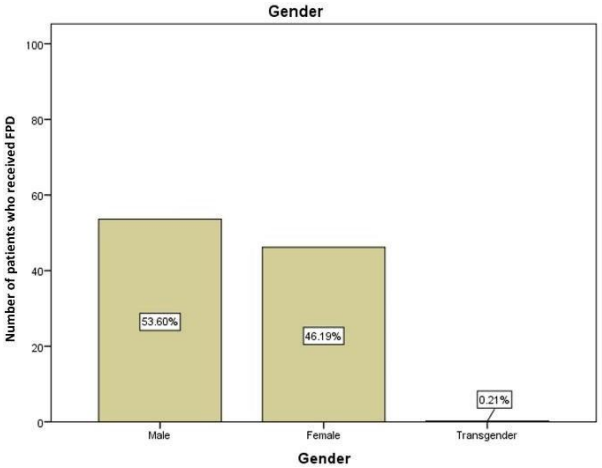

Figure-2 shows the bar graph of distribution of gender among patients who were delivered with FPD. X-axis represents Gender and Y-axis represents the number of patients who were delivered with FPD. Of this

Males received FPD at a higher rate (53.60%), followed by females (46.19%) and transgenders (0.21%) which was lesser comparatively.

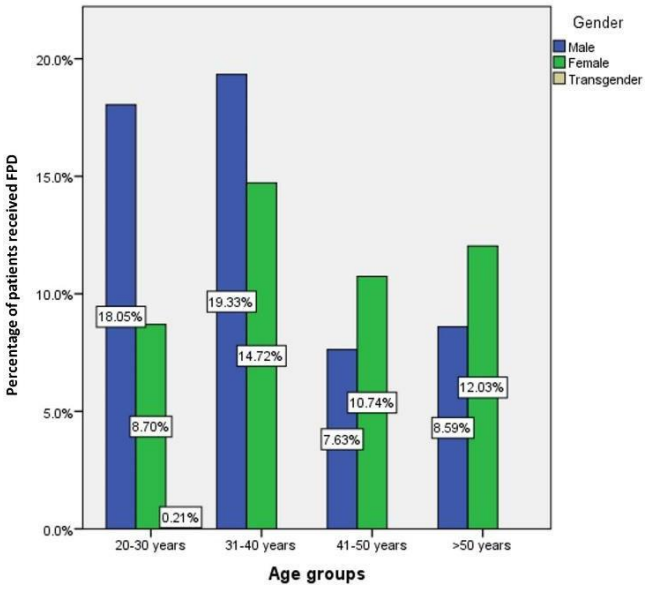

Figure-3 shows the bar graph representing the association between gender and age of patients who received Fixed partial denture (FPD) where X-axis represents the age association with gender and Y-axis represents the Percentage of patients received FPD. Males denoted in (blue), females in(green) and transgenders in (yellow) Males seem to receive FPD at a higher rate in 30-40years of age. *p*-value <0.05 (Chi-square value - 46.955[a]; P-value : 0.000). Hence, it is statistically significant.

From the statistics performed, the distribution of age among people who were delivered FPD were categorized as 20-30years, 31-40years, 41-50years and >50years. Of this people of age range 31-40years received FPD at a higher rate (34.05%) and people of 20-30 years (26.96%), >50years (20.62%), 41-50yrs (18.37%) which was lesser comparatively (Figure-1). Enabulele JE et al.,[39] agreed that younger people are more willing to replace their missing teeth with Fixed Dental Prosthesis (60%) when compared to the older adults (40%). Hiltunen K et al.,[2] mentioned in his study that 83% of the total population ranging from 20-40years were more willing to get Fixed Dental Prosthesis than the elder age group (77%). Glantz P-OJ et al.,[23]also supported our study stating higher willingness for Fixed Dental Prosthesis (88%) towards younger adults (20-30years) than the elder ones (30-65years). There was no probable opposing studies regarding willingness of Fixed Dental Prosthesis towards older adults.

The distribution of gender among patients who were delivered with FPD showed that Males received FPD at a higher rate (53.60%) than females (46.19%) and transgenders (0.21%) which was lesser comparatively. Douglass CW et al.,[40] from his study found similar results stating higher male preferences (60%) for Fixed Dental Prosthesis compared to Females(40%). Enabulele JE et al.,[39] opposed our study stating higher female preference for Fixed Dental Prosthesis because more female patients were concerned about aesthetics.

The association between the gender and age of patients who received FPD was done by Chi square test. The age range of 20-30years, males received FPD at a higher rate (18.05%) than females (8.70%) and transgenders (yellow) (0.21%). In the age range of 31-40 years 19.33% were males and (14.72%) were females (green). In the age range 41-50years males were (7.63%) and females (10.74%) which was higher. In the age range >50 years males (blue) were (8.59%) and females were (12.03%). Chi square test was done and association between age and gender of patients delivered with FPD was found to be statistically significant, since p-value <0.05 (Chi-square value - 46.955[a]; P-value : 0.000)(Figure-3). Dolan TA et al.,[38] agreed with our study that as age increased the willingness for Fixed Dental Prosthesis got decreased and

it was seen highly preferable among males *(p*<0.05*)*. Since, P(<0.05) there was a higher statistical significance between the age and gender of patients who received FPD.

LIMITATIONS OF THE STUDY :

The study was undertaken with a small sample size hence, it should be generated to a larger population. This altered response was obtained because of the absence of patients own perception which was affected by the time of calling, social factors.

FUTURE SCOPE :

Study for a larger population should be done. For the diagnosis and treatment planning of Fixed Dental Prosthesis should be recorded.

4. CONCLUSION:

Within the limits of the study, it was concluded that as age increases people show less preference for prosthetic restoration to replace missing teeth no matter what the reason, maybe. Steps to be taken to educate every possible patient about the various Fixed prosthesis available for the replacement and guide them towards selecting the best available option.

5. ACKNOWLEDGEMENT :

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6. CONFLICT OF INTEREST :

Nil

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