

Distribution of patients with fixed orthodontic treatment based on age, gender, education level, and occupation

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ABSTRACT

Introduction: Fixed orthodontic is one of the option to correct malocclusions. Factors of age, gender, educational background and occupation of an individual can affect the understanding and concern regarding oral health. It also deter-mines a person's attitude in choosing the right treatment. This study was aimed to determine the distribution of patient with fixed orthodontic treatment based on age, gender, education level, and occupation in Universitas Padjadjaran Dental Hospital. **Methods:** This study was conducted with a descriptive method by collecting all the data of the patient with fixed orthodontic treatment from the medical record in Universitas Padjadjaran Dental Hospital during the 2009-2011 period. **Results:** The results showed that fixed orthodontic treatment was majority used by 71.65% adults, 79.53% females, 50.39% patients in the level of education of high school, and 53.54% by the university student. **Conclusion:** Fixed orthodontic treatment is used more by adults, females, high school graduated, and patient with occupation as a university student.

Keywords: Fixed orthodontic, age, gender, education level, occupation.

INTRODUCTION

As the science and technology grows, it's easier to spread and find information about oral health. However, the public still does not necessarily understand the content of the information and everyone has different perceptions. Factors of age, gender and educational background and type of work a person can affect the understanding and concern of the individual about oral and dental health. It also determines a person's attitude in choosing the right treatment.

Aesthetics is one reason someone comes to the dentist to do the treatment. This aesthetic can be obtained one of them with orthodontic treatment. Orthodontic treatment is performed for teeth that are malocclusion to obtain normal

occlusion. Understanding of the malocclusion itself is the existence of adaptive postural position, the motion of translocation closure, reflex mechanism, teeth crowding, irregular teeth arrangement, tooth trauma to soft tissue and poor personal appearance or interference with the normal speech caused by the position of the tooth.¹

There are two kinds of commonly used orthodontic tools, namely removable orthodontic appliances and fixed orthodontic appliances. Installation of fixed orthodontic equipment has now become a trend among the public. The goals of everyone vary in the use of fixed orthodontic appliances. There are three main reasons for orthodontic treatment that is to improve the appearance of facial dento, to improve the

function of dental occlusion, and to eliminate occlusion which can damage dental health and periodontal tissue in the long run.²

In pediatric patients, orthodontic treatment is usually performed due to malocclusion caused by bad habits such as thumb sucking, mouth breathing, and tongue thrust. In adolescent patients, the use of fixed orthodontic appliances is not only to improve appearance, but also to improve self-confidence. The presence of peers undergoing orthodontic treatment is also a factor in the use of orthodontic tools among adolescents.³ More than 75% of adult patients are dissatisfied with their dental aesthetic and this is the main reason for orthodontic treatment.⁴ Burden's research in Northern Ireland stated that there is no significant difference between women and men in obtaining orthodontic treatment. However, women performed more orthodontic treatment than men due to more lack of satisfaction with the appearance of their teeth.⁵

Dental services, in this case orthodontic treatment with fixed orthodontic is given by orthodontists who work in educational institutions, hospitals, and private clinics. Universitas Padjadjaran Dental Hospital is one of the hospitals providing orthodontic treatment. The data of patients with orthodontic treatment at Universitas Padjadjaran Dental Hospital include age, sex, education level, and patient work.

Based on the above background, this research was conducted to find out the many cases of orthodontic treatment with a fixed orthodontic appliance at Universitas Padjadjaran Dental Hospital. There is not enough data on orthodontic treatment cases with fixed orthodontic appliances at the Dental Hospital. The purpose of this study was to determine the number of patients with fixed orthodontic treatment at the Orthodontic Clinic of Universitas Padjadjaran Dental Hospital in the period 2009-2011 and to get a complete description of age, sex, educational level and patient work with fixed orthodontic treatment at Orthodontic Clinics of Universitas Padjadjaran Dental Hospital.

METHODS

This research is a descriptive research. This research was conducted by collecting patient data

treated with fixed orthodontic appliance from patient medical record which is in Orthodontic Clinics of Universitas Padjadjaran Dental Hospital

The population in this study were all patients with fixed orthodontic treatment recorded in medical record of Orthodontic Clinics of Universitas Padjadjaran Dental Hospital, while the sample was patients with fixed orthodontic treatment recorded in medical record of Orthodontics Clinic of Universitas Padjadjaran Dental Hospital period 2009-2011 and classified by age, gender, education level, and occupation.

RESULTS

Based on the results of the study, the number of distribution of patients with fixed orthodontic treatment at Universitas Padjadjaran Dental Hospital during the period of 2009 to 2011 was 127 people (Table 1.)

Based on age, fixed orthodontic treatment at Universitas Padjadjaran Dental Hospital is mostly done in the adult age group of 18 years and above with the number of patients 91 people and the percentage value of 71.65%.

Based on gender, fixed orthodontic treatment was mostly done on female with 101 patients (79.53%) and male 26 people (20.47%).

Based on the level of education, patients with the last educational background of the highest school get fixed orthodontic treatment is 64 people with a percentage of 50.39%.

Table 1. Distribution of patients with fixed orthodontic treatment

No	Year	Total	Percentage
1	2009	19	14.96%
2	2010	29	22.83%
3	2011	79	62.20%
Total		127	100%

Table 2. Distribution of patients with fixed orthodontic treatment based on age

No	Age	Total	Percentage
1	Children (6-11 yo)	1	0.79%
2	Adolescent (12-17 yo)	35	27.56%
3	Adult (>18 yo)	91	71.65%
Total		127	100%

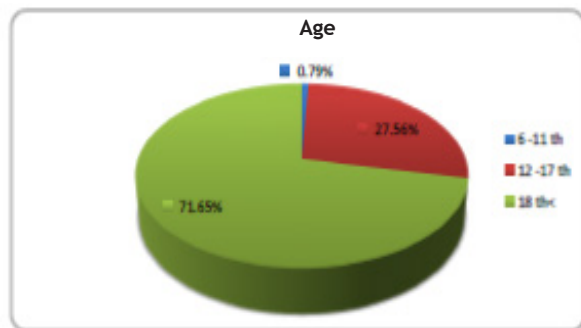


Figure 1. Percentage of orthodontic treatment patients based on age

Table 3. Distribution of patients with treatment of fixed orthodontic by gender

No	Gender	Total	Percentage
1	Male	26	20.47%
2	Female	101	79.53%
Total		127	100%

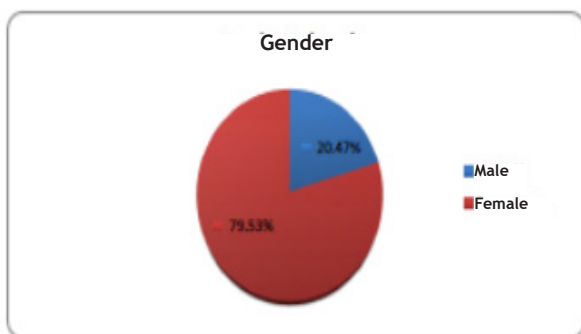


Figure 2. Percentage of patient with fixed orthodontic treatment based on gender

Table 4. Distribution of patients with treatment of fixed orthodontic based on level of education

No	Education	Total	Percentage
1	Elementary	9	7.09%
2	Middle School	31	24.41%
3	High School	64	50.39%
4	Diploma	8	6.30%
5	Bachelor	14	11.02%
6	Master	1	0.79%
Total		127	100%

Based on work, fixed orthodontic treatment is mostly done by patients with student work that is as much as 68 people with a percentage of 53.54%.

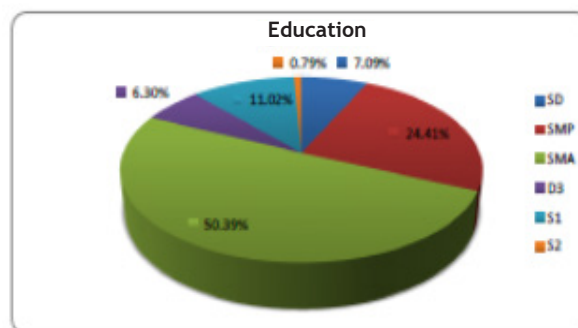


Figure 2. Percentage of patients of orthodontic treatments based on level of education

Table 5. Distribution of patients with fixed orthodontic treatment based on occupation.

No	Education	Total	Percentage
1	Employee	17	13.39%
2	Self-employed	3	2.36%
3	Student	38	29.92%
4	Undergraduate	68	53.54%
5	Housewife	1	0.79%
Total		127	100%

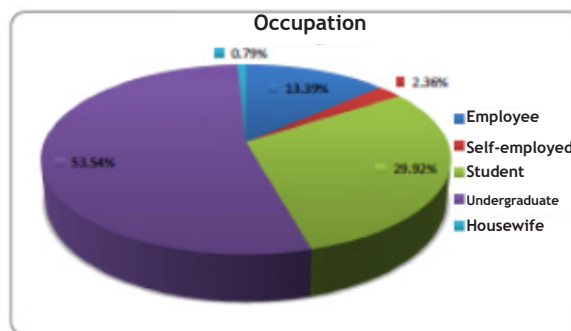


Figure 4. Percentage of patients with fixed orthodontic treatment based on occupation

DISCUSSION

The results of the study in Table 1 show that there is an increase in the number of patients from 2009 to 2011. In 2009 recorded patients with fixed appliance orthodontic appliances as many as 19 people, in 2010 as many as 29 people, and in 2011 there were 79 people with a total of 127 patients.

Based on data from this study, the fixed orthodontic appliance maintenance is mostly done by the adult age group that is 18 years and above. Based on the results of the study, it was noted that the number of adults receiving fixed orthodontic

treatment were 91 people (71.65%). It is said that 75% of adult patients are dissatisfied with their dental appearance and it is the primary motive for seeking care.^{4,6} Adults will usually be more aware of the need to maintain oral health. With the increasing use of internet and social media, adults will pay more attention to the aesthetic appearance which can be obtained through orthodontic treatment which is also increasingly accepted by the public. The demand for orthodontic treatment in adults is due in childhood to refuse or not to get orthodontic treatment, and to adults who have performed previous orthodontic treatment but relaps.⁷ From the results of research conducted by Bos et al in 2005 in Amsterdam also said that older respondents have a more positive view of orthodontic treatment compared with younger respondents.

By sex, there is a significant difference in the number of fixed orthodontic treatment patients. From the results of the study, there were recorded female patients (101) (79.53%), while male patients were 26 (20.47%) with a ratio of 4: 1. This is consistent with the statement of Tin-Oo et al that states that dissatisfaction with dental performance is more felt by women. Dissatisfaction with tooth color and teeth of protusi will have a negative effect on patient satisfaction on their overall dental appearance. Women do more orthodontic treatment with aesthetic reasons, and parents also pay more attention to the appearance of their daughters. Women also pay more attention to their oral health than men.⁸ Similar results were also obtained in a study by Abdullah in Malaysia. The study showed that orthodontic treatment was performed in most women's groups. This is because women tend to pay more attention to aesthetics and beauty. Men showed a lack of concern for improving their dental performance compared to women.⁵ Christopherson E.A. et al (2009) states, women who enter adolescence showed more caring attitude about the appearance of self than men. They expressed a sense of dissatisfaction in the appearance of teeth more felt by women and this is related to the factor of increasing age.

Based on the level of education, fixed orthodontic treatment is mostly done by patients with high school final level of 64 people (50.39%).

Education greatly determines the behavior and perceptions of a person about oral health. The level of education may reflect knowledge that may affect a person's health habits and behaviors. The lower the level of one's education the lower the level of knowledge about oral health. In patients with high school education, peers who use orthodontic treatment also influence the patient's desire to get orthodontic treatment. The higher the educational level of a person, the person understands and understands the importance of maintaining oral health and shows more awareness to get treatment. The level of education relates to the type of work a person, it also affects the socio-economic situation. Based on the type of work, fixed orthodontic treatment is mostly done by the students ie 68 people with a percentage of 53.54%. Some evidence suggests that one's socio-economic circumstances may be a factor affecting one's perception of malocclusions, individuals with higher social classes exhibit a more critical view of their aesthetic dental appearance.⁵ Socio-economic factors also affect a person's perception of the need for orthodontic treatment.¹⁰

CONCLUSION

Fixed orthodontic treatment is used more by adults, females, high school graduated, and patient with occupation as a university student.

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