

## Prosthodontic treatment needs of removable prostheses in University of Dental Medicine, Mandalay, Myanmar during 2011-2014

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### Abstract

With changing trends in general dental practice among the community, the prosthodontic needs of the local community for any prosthesis may be influenced. Moreover, prosthodontic treatment needs may vary depending on age and gender of the patients. A retrospective observational study was conducted to evaluate the prosthodontic treatment needs of removable dental prostheses among defined population. Patient records were examined and data was recorded concerning age, gender and removable prosthodontic treatment prescribed at University of Dental Medicine, Mandalay, Myanmar in 2011-2014. There was significant association between age and type of removable prosthodontic treatment need but no significant association was found between gender and the type of removable prosthodontic treatment need. The need of more demanding removable prosthodontic treatment is increased with the advancing age and the oral health care services are suggested to emphasize to improve the removable prosthodontic service especially to

older population.

### Introduction

The loss of teeth could be a disturbing emotional experience for many people [1-3] and can lead to substantial impacts on quality of life. [4] With advancing age the number of people suffering from tooth loss and the number of missing teeth increases. Prosthodontic treatment needs may vary depending on age and gender of the patients. With the changing trends in general dental practice, the prosthodontic needs of the local community for any prosthesis may be influenced. Assessment of prosthodontic needs in a special population would aid in planning the oral health service programs especially in the institutional setting. To date, there is no report concerning age, sex and related prosthodontic treatment needs in Mandalay, the largest city of upper Myanmar. This study was aimed to evaluate prosthodontic treatment needs of removable dental prostheses at University of Dental Medicine, Mandalay, Myanmar during 2011-2014.

## **Materials and methods**

A retrospective cross-sectional observational study was conducted. Data on removable prosthodontic treatment needs were taken from dental records from the Department of Prosthodontics, University of Dental Medicine, Mandalay, Myanmar from January 2011 to December 2014. Data collection was done concerning the age, gender and the type of removable prosthodontic treatment (complete dentures, removable partial dentures, obturator prosthesis). Data was then summarized and analyzed by chi-square test to explore the association between age, gender and type of prosthodontic treatment.

## **Results**

A total of 273, 297, 340 and 344 patients were treated in the Department of Prosthodontics in 2011, 2012, 2013 and 2014 respectively. The age distribution each year is demonstrated in figure 1. It is appreciable that the trend of age distribution was consistent in every year with 45-64 year age group being the most common and 15-24 year age group being the least common age group seeking removable prosthodontic treatment.

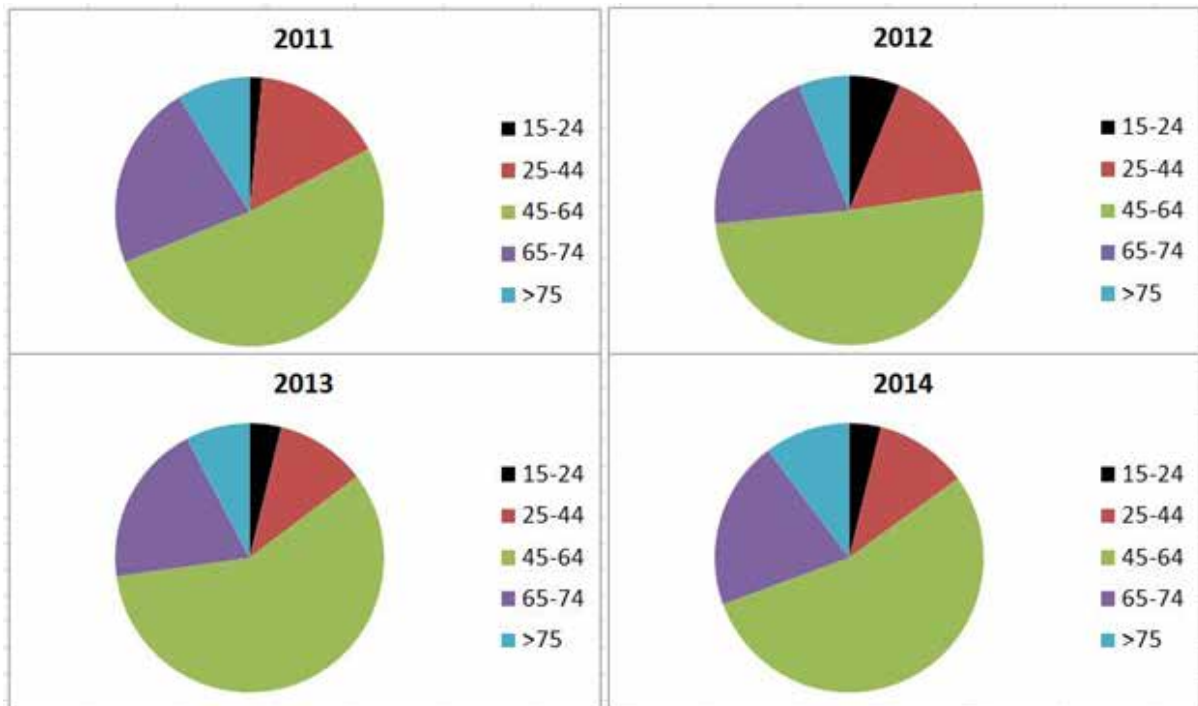


Figure 1. Distribution of different age groups seeking for removable prosthodontic treatments during 2011-2014

The number of patients taking various types of removable prosthodontic treatment was shown in figure 2. Similar trend of case distribution for each treatment type can be noticed for every year from 2011 to 2014. Upper & lower removable partial dentures (P/P) was the most common type of treatment, followed by single upper or lower partial and complete dentures. Furthermore, figure 2 demonstrates the number of cases for each type of removable prosthodontic treatment prescribed to each age group. The data again demonstrated the similar trend of distribution for every year. It can be seen that in all types of removable prosthodontic treatments, 45-64 years age group was the most common one seeking for the treatment ( $p < 0.05$ ).

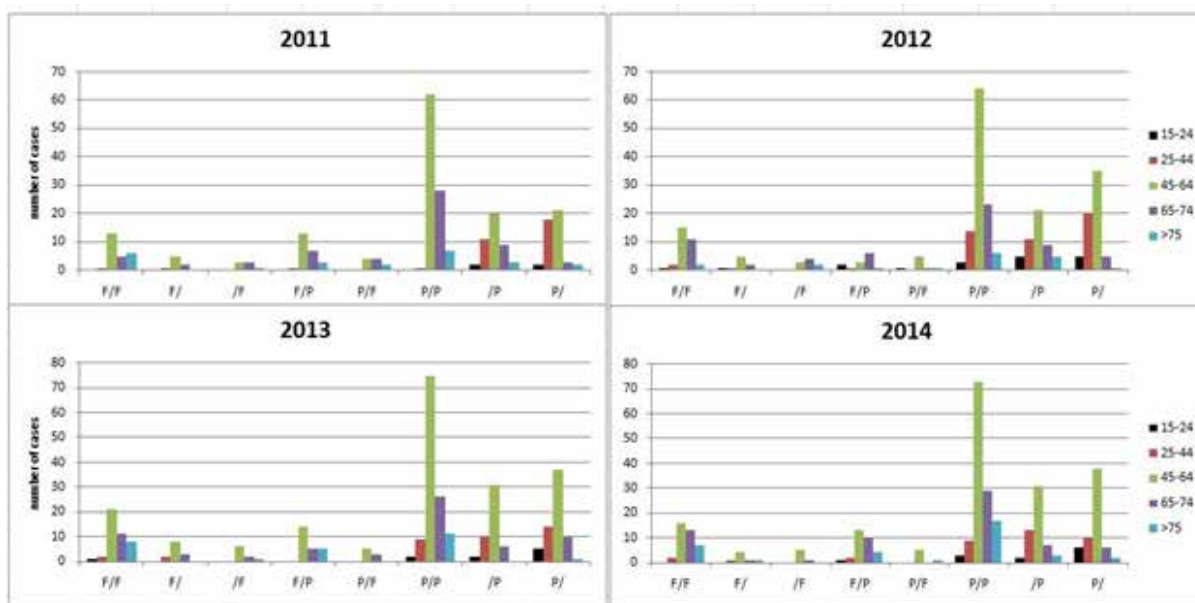


Figure 2. Distribution of types of removable prosthodontic treatments by different age groups during 2011-2014

When the data for all four years was combined and analyzed, there was significant association between gender and type of removable prosthodontic treatment needs ( $p < 0.05$ ). Female predominantly tended to seek removable partial dentures either upper, lower or both (figure 3).

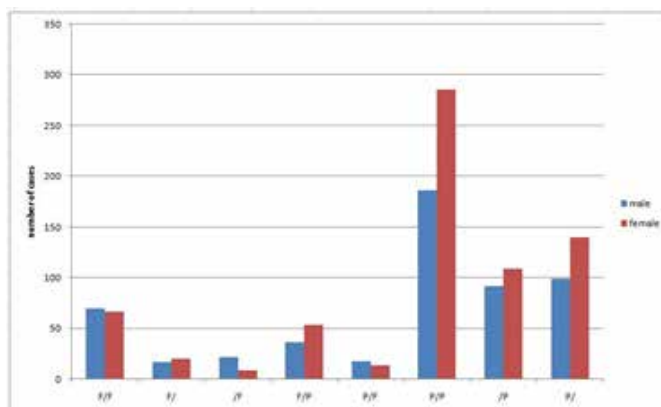


Figure 3. Distribution of types of removable prosthodontic treatments by male and female patients for combination of all four years (2011-2014)

## Discussion

The age group (45-64 years) was the most common age group seeking for removable prostheses. This age group was also the most common age group in each type of removable prosthodontic treatment. The similar trend of age distribution for each type of removable prostheses every year studied may be attributed to the chronic cumulative nature of oral diseases which tends to cause the aged individual lose more teeth. The previous study conducted in the University of Dental Medicine, Yangon also revealed the same trend. [5] Although Yangon and Mandalay are two biggest cities located in lower and upper part of the country respectively, the trend of removable prosthodontic treatment need is the same. It may also reflect the disease trend in Myanmar: periodontal diseases might be the culprit of tooth loss for the age group 45-64 years since they tended to lose more teeth and seek more removable partial dentures. A further data collection is suggested to determine the situation in rural areas of the country.

Upper & lower removable partial dentures were the most common type of treatment, followed by single upper or lower partial dentures and complete dentures. This might reflect the oral health status and general treatment trends in the population. It is speculated from this finding that people retain natural teeth due to better self oral hygiene care or the dental care service is emphasizing to preserve the natural teeth

rather than extracting them. Since the data was taken from the urban population, people may have more knowledge about advantage of retaining natural teeth and they may seek restorative dental treatments especially root canal treatment to avoid extractions. It would be more interesting if the present data can be compared with that obtained from rural areas.

On the other hand, complete denture cases (F/F, F/, /F, F/P, P/F) were fewer in all years studied. While it is good for the patients maintaining some of their natural teeth, the dental students and house officers are exposed to fewer complete denture cases for clinical teaching and learning and acquiring clinical skill necessary for treatment with complete dentures.

In the present study, female patients seek more significantly to removable partial denture treatments than male patients did. It is interesting since the finding is not the same as the previous study in University of Dental Medicine, Yangon, in which there was no significant gender predilection. It is however not clear whether the females lost more teeth or whether they had better attitude towards replacing missing teeth than males did.

Since removable partial dentures were the most common type of prostheses and the similar trend of predominance, prosthodontic curriculum should be arranged so that there is enough time for teaching of removable partial denture principles. The facilities and materials

for construction of removable partial dentures should also be provided more in the universities.

### **Conclusion**

The increasing need of removable partial denture treatments and 45-64 years age group being the most common age group requiring the removable prosthodontic treatment suggest the prosthodontic care to emphasize to improve the removable partial denture service and further study to explore the cause of more tooth loss in 45-64 years age group is warranted.

### **References**

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