

A study on association between age, gender and type of removable prosthodontic treatment needs in University of Dental Medicine, Yangon, Myanmar

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Abstract

Prosthodontic treatment needs may vary depending on age and gender of the patients. It may also reflect the general treatment trend among the specific community. A retrospective observational study was performed to evaluate the association between age, gender and type of removable prosthodontic treatment need. Patient records were examined and data was recorded concerning age, gender and removable prosthodontic treatment prescribed at University of Dental Medicine, Yangon, Myanmar in 2012-2013. There was significant association between age and type of removable prosthodontic treatment need but gender had no significant association with the type of removable prosthodontic treatment need.

Introduction

Oral diseases such as dental caries, tooth loss and periodontal disease are universally prevalent in adults and considered a major public health problem¹. Since progression of the most common dental diseases that ultimately lead to tooth loss is often time dependent, it appears that with advancing age the number of people suffering from tooth loss and the number of missing teeth increase. The loss of teeth could be a disturbing emotional experience for many people 2-4 and can lead to

substantial impacts on quality of life⁵. Prosthodontic treatment needs may vary depending on age and gender of the patients. It may also reflect the general treatment trend among the specific community. 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. This study was aimed to evaluate the association between age, gender and type of removable prosthodontic treatment needs at University of Dental Medicine, Yangon, Myanmar in 2012-2013.

Materials and methods

A retrospective cross-sectional observational study was performed. Data on removable prosthodontic treatment needs were taken from dental records from the Department of Prosthodontics, University of Dental Medicine, Yangon, Myanmar from January 2012 to December 2013. The age, gender and the type of removable prosthodontic treatment (complete dentures, removable partial dentures, obturator prosthesis). Data was then analyzed by chi-square test to explore the association between age, gender and type of prosthodontic treatment by using SPSS version 11.1.

Results

A total of 428 and 454 patients were treated in the Department of Prosthodontics in 2012 and 2013 respectively. The distribution of age and gender is demonstrated in figure 1. It is appreciable that the trend of age and gender distribution in 2012 and 2013 were closely similar. The 45-64 yr age group was the most common age group seeking removable prosthodontic treatment. The 25-44 and 45-64 yr age group showed that female seek removable prosthodontic treatment more than male and this trend was reverse in geriatric age groups (65-74, >75 yr).

The number of patients taking various types of prosthodontic treatment was shown in figure 2 comparing between male and female. Similar trend of case distribution for each treatment type can be noticed for 2012 and 2013. Upper & lower removable partial dentures were the most common type of treatment, followed by single upper or lower partial and complete dentures. There was no significant association between gender and type of removable prosthodontic treatment.

Furthermore, figure 3 demonstrates the number of cases for each type of removable prosthodontic treatment prescribed to each age group.

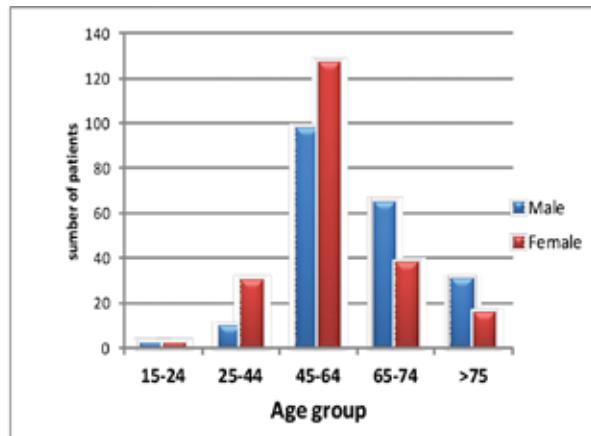
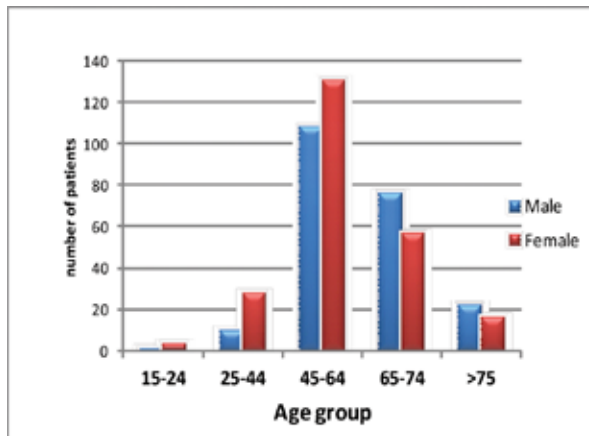


Figure 1. The number of patients seeking for the removable prosthodontic treatment in 2012 (left panel) and 2013 (right panel).

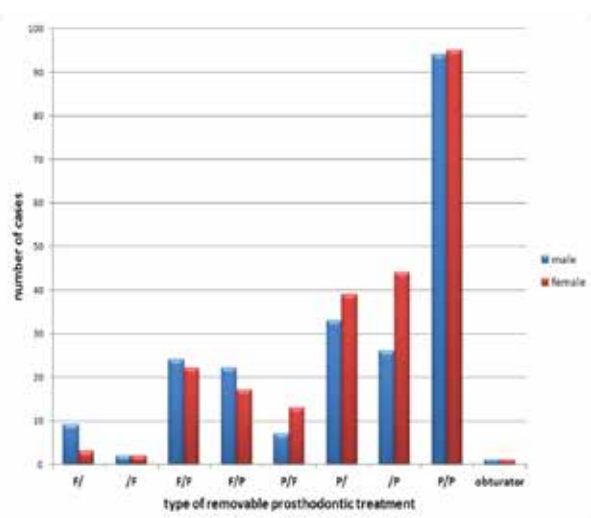
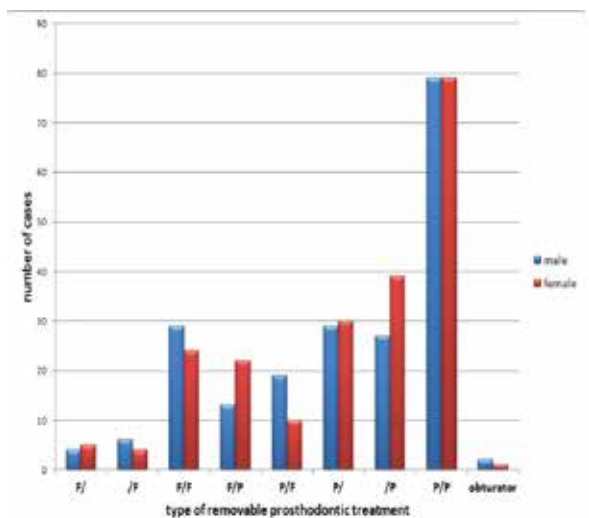


Figure 2. The number of male and female patients seeking for each type of removable prosthodontic treatment in 2012 (left panel) and 2013 (right panel).

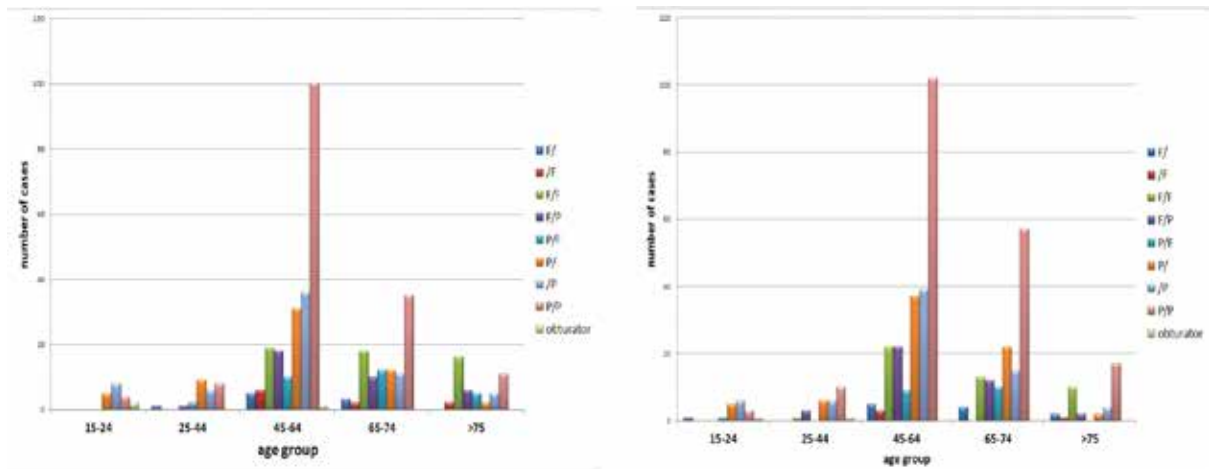


Figure 3. The number of patients in different age groups seeking for each type of removable prosthodontic treatment in 2012 (left panel) and 2013 (right panel).

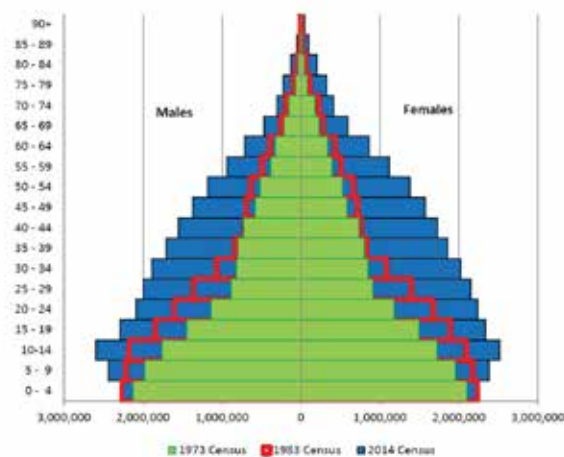


Figure 4. Myanmar population pyramids 1973, 1983, 2014 (by courtesy of the Population Department, Ministry of Immigration and Population, Myanmar, May 2015)

The data again demonstrated the similar trend of distribution for both 2012 and 2013. It can be seen that with advancing age, there was increased number of patients wearing complete dentures and upper & lower removable partial dentures. There was significant association between age and type of removable prosthodontic treatment needs ($p < 0.05$, chi-square test). Interestingly many of the oldest age group (>75 yr) still retain some of their natural teeth since the data showed the need

for removable partial dentures apart from complete dentures.

Discussion

This study was aimed to report the association between age, gender and removable prosthodontic treatment in Myanmar. Although data was collected from 2012 and 2013, the trend of patient number, age group and gender distribution, and the treatment needs were similar, reflecting the current situation, at least in Yangon which is an urban area. However it should be noticed that the data was taken only from the patient population who seek treatment in the University of Dental Medicine, Yangon only. It would be more interesting if such study can be carried out to include patients seeking prosthodontic treatments in private dental clinics in both urban and rural areas. A more extensive country-wide data collection is suggested to know the situation in the different areas of the country.

Referring to the national population census 2014 data (figure 4)6, it is interesting that although it belongs to relatively narrower portion of the population pyramid, the 45-64 yr age group was the most common age group seeking removable prosthodontic treatment (figure 1). This clearly indicates the chronic cumulative nature of oral diseases which tends

to cause the aged individual lose more teeth. However, in accordance with the sharp narrow trend in population pyramid, the number of geriatric patients (>65 yr) decreased.

In the present study, there was no significant association between gender and type of removable prosthodontic treatment need. It is rational from the fact that dental diseases affect both male and female to the same extent. Besides this finding, 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 treatment trends in the population to some extent. It is speculated from this finding that people retain natural teeth 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, it is possible because people have more knowledge about advantage of retaining natural teeth and 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.

In the present study, there was significant association between age and type of removable prosthodontic treatment needs; with advancing age, there was increased number of patients wearing upper & lower removable partial dentures and complete dentures. Although geriatric patients (>65 yr) have to wear complete dentures, many of them still retain some of their natural teeth as demonstrated in figure 3. It is suggested to emphasize the importance of the dental care of geriatric patients since the geriatric population has expanded much more than that of 30-40 years ago.

Conclusion

With increasing age, the removable prosthodontic treatment needs are increased and the oral health care services are suggested to emphasize to improve the removable prosthodontic service they are providing especially to older population.

References

1. Petersen PE, Bourgeois D, Ogawa H, Estupinan-Day S, Ndiaye C. The global burden of oral diseases and risks to oral health. *Bull World Health Organ.* 2005;83:661–669.
2. Dodge CA. Prevention of complete denture problems by use of “overdentures” *J Prosthet Dent.* 1973;30(4):403–11.
3. DeFranco RL. Overdentures. *Dent Clin North Am.* 1977;21(2):379–94.
4. Renner RP, Foerth D, Levey M. Preventive prosthodontics-overdenture service. A case report. *N Y State Dent J.* 1977;43(1):17–21.
5. Locker D, Miller Y. Evaluation of subjective oral health status indicators. *J Public Health Dent.* 1994;54(3):167–76.
6. The 2014 Myanmar Population and Housing Census, Highlights of the Main Results, Census Report Volume 2 – A, Department of Population, Ministry of Immigration and Population, May 2015.