

A Study of Assess of Removable Prosthetic Status and Treatment in Greek Population

Eleonora Blioumi DDS, PhD¹, Fotoula Nikolopoulou DDS, MD, PhD, MPH², Maria Kotanidou DDS³

¹Senior Registrar General Hospital of Thessaloniki 'Agios Pavlos'

²Assistant Professor of Dental School. National and Kapodistrian University of Athens

³Senior Registrar, General Hospital of Thessaloniki 'Agios Pavlos'

Abstract: *The present study has been carried out to assess the prosthetic status and needs among the Greek population in Thessaloniki. Interviews and clinical exams were performed in a sample of 270 patients aged from 23 to 85 years. Females 169 [62, 5%] and males 101 [37, 4%]. Edentulous patients were 15. Four [26,6] of them wore complete dentures in good condition. Five [33,3%] complete dentures must be repaired and six patients [40] wanted new complete dentures. Sixteen patients were partially edentulous. Six of them [34,5%] wore removable partial denture in good condition. Two [12,5%] patients needed a new appliance.*

Keywords: edentulous, prosthetic status, partial dentures

1. Introduction

This paper presents data on the prosthetic status of a sample of 270 Greek patients. The volunteer participants were recruited among the patients who came to the General Hospital of Thessaloniki 'Agios Pavlos' Over the last 20 years the global burden of edentulism has declined on average. However, in contrast to high-income countries [HIC] where the prevalence of the edentulism is decreasing an opposite trend is observed in low and middle-income countries where the rate of edentulism is increasing, mainly as the result of increments in periodontal diseases and caries.[1,2] Over the past century, complete or partial dentures have been widely used in dental clinics to restore the oral function.[3,4,5]

Several studies on improvement in oral functions following prosthetic rehabilitation exist in the literature.[4,5] In order to promote the oral health of elderly people we need to know their prosthetic status and treatment.

The aim of the present study was to evaluate the dental prosthetic status and treatment needs of the Greek population in Thessaloniki.

2. Materials and Methods

A cross-sectional study was conducted among the Greek population in Thessaloniki. This study was conducted over a period of four months. The study sample comprised all the patients examined during that period.

The study sample included 270 patients, aged 23-85 years, who visited the General Hospital of Thessaloniki 'Agios Pavlos'. The females were 169 [62,5%] and males 101 [37,4%].

Patients without any acute illness and or not willing to be included in the examination were excluded from the study. The participants were first interviewed to obtain general information and sociodemographic variables. This was

followed by oral examination. The examiners assessed the dental prosthetic status and treatment needs according to criteria described in the WHO oral health assessment form 1997[6]

The WHO Code and criteria were as follows:

Prosthetic status

Code 0: No prosthesis

Code 1: Bridge

Code 2: More than bridge

Code 3: Partial denture

Code 4: Both bridges and partial dentures.

Code 5: Complete dentures

Code 9: Not recorded

Prosthetic need

Code 0: No prosthesis needed

Code 1: Need for one-unit prosthesis

Code2: Need for multi-unit prosthesis

Code 3: Need for a combination of one-and /or multi-unit prosthesis.

Code 4: Need for full prosthesis [replacement of all teeth]

Code 9: Not recorded

Table 1: Prosthetic status according to gender

Gender	Code 3	Code 5
Male	4	8
Female	12	7

Table 2: Prosthetic status and needs in Greek patients

Partial Dentures	n=16	%
Prosthetic appliance		
In good condition	6	37,5%
Prosthetic appliance		
Needs repair	8	50%
Construction new RPD	2	12,5%
Complete Dentures	n=15	%
CD in good condition	4	26,6%
CD needs repair	5	33,3%
Construction new CD	6	40%

3. Discussion

The present study revealed that the edentulism is a low prevalent condition among people living in Thessaloniki [Table 1]. The data were collected through structured, face to face interviews and clinical examinations. The examined patients were 270, aged 23 to 85 years. Table 2 shows that 31 patients [11.5%] wore removable prosthetic appliances. Only 6 patients from 270 were edentulous and needed to construct complete dentures. Another study revealed that edentulism is a highly prevalent condition in Brazil [15,2%]. Our study shows the mean age of edentulous was 67 years. Another study focusing on Myanmar, Zimbabwe, and Ghana revealed that the edentulous people were 39,1 years old. [8]

A clinical study which was carried out in Georgia demonstrated a more limited need for removable dentures [3,2-4,7] among adult population. The findings of an epidemiological survey clearly demonstrated a highly increased need for prosthetic treatment among the population in India. [10, 11]

In relation to the classification of the needs for the prosthetic appliance, the fourth edition of the manual the Oral Health Surveys give us advice, which we took into account in our methods. When addressing the need for prosthesis criteria, the different aspects involved in the needs assessed by professionals and perceived by patients must be considered. Professional assessment is based on clinical conditions. [12]

Many studies regarding dental prosthetic status and treatment needs were done on elderly patients residing at elderly homes and elderly general population. [13, 14, 15]

A survey demonstrated that elderly people living in the largest residential home in Athens were edentulous 64,4%. [16] The impact of prosthodontic care was overshadowed by in the increases number in the lost teeth. Thus, the factors associated with the need of prosthodontic care and its impact on daily life were included in a complex network with inter-related factors. [17]

A cross-sectional study which was conducted in Saudi Arabia showed that 46,7% of the sample needed prosthodontic care. [18]. This study revealed that there wasn't a statistically highly significant difference between gender and age according to prosthetic treatment.

Shigli et al showed that 58,3% males and 59,5% of females required complete dentures.[19] Another study showed that there was statistically significant difference between socioeconomic status and the type of prosthesis required by the patients.[19]

A study which was carried out in Queen Alia Military Hospital in Jordan showed that the need for removable partial dentures was a high level [64,4] [20].

A cross-sectional survey was conducted among institutionalized elderly patients living in geriatric homes showed that 53,1% of males and 45% of females had no prostheses in upper and lower arch.[21] The dental

prosthetic status and prosthetic needs of geriatric patients attending the College of Dentistry was evaluated out of 286 edentulous patients, the proportion 69,06% needed some form of prosthetic treatment, while 73,77% didn't have any prosthesis in upper and lower arch.[22]

After much deliberation, we concluded that a rather small of Greek patients needed prosthetic treatment.

The challenges of this new century and the breakthroughs in dental science should lead the dental community to generate new programs concerning dental care with better oral health outcomes.

References

- [1] I Nadgere, A Gala-Doshi, S Kishore 'An Evaluation of prosthetic status and prosthetic need amongst people living in and around Panvel, Navi-Mumbai. A survey.' *Int J Prosth. Dent*, 2010; 1: 6-9
- [2] Mersel A, Auaise JS, Shem-Tov. Prosthetic needs and demands services of a group of elderly people in Israel' *Com. Dent. Oral Epid*, 1984; 12[5]:315-318
- [3] Klemetti E 'Areview of residual ridge resorption and bone density.' *J Prosth. Dent*, 1996; 75: 512-514
- [4] Koshimo H, Hirai T, Ishijina I et al ' Quality of life and masticatory function in dentures wears' *J Oral Rehabil*, 2006; 33: 323-329
- [5] Anastasiadou v, Robin Heath ' The effect of denture quality attributes on satisfaction eating difficulties' *Gerod*, 2006; 1: 23-32
- [6] World Health ORGANIZATION.' Assessment form in oral health survey: *Basi Methods*. 4th ed. Geneva: World Health Organization, 1997: pp 21-46
- [7] ST Tyrovolas, A Koyanagi, D P Panagiotakos et al. 'Population prevalence of edentulism and its association with depression and self-related health. *Scientific Reports* 6; Article number : 37083[2016]
- [8] Gunilla Nordenram, Thomas Davidson, Goran Gynther et al. 'Qualitive studies of patients perception of loss of teeth the edentulous state and prosthetic rehabilitation: A systematic review with meta-synthesis. *Acta Odont. Scand*, 2013; [3-4]:937-951
- [9] Makhviladre G, Tsi Taisvili L, Kalandadze M et all. Evaluation of Edentulism, prosthetic status and prosthodontics treatment needs among the adult population of Georgia. *Georgian Medical News*, 2016; 253: 30-34
- [10] Hongal S, Torware NA, Chaandrashekhar BR, et all ' An evaluation of dental prosthetic status and prosthetic needs among eunuchs[trans gender] Residing in Bhopal city, Madhya Pradesh, India; A cross-sectional study.' *Ann. Med Health Sci.Res.*; 2014; 4[6] : 943-946
- [11] Shigli K, Hebbal M Angadi GS 'Prosthetic status and treatment needs among patients attending the prosthodontic department in a dental institute in India.' *Eur. J Prosth. Restor. Dent*, 2009; 17:85-89
- [12] Mary Norma Partida 'Geriatric Prostodontic Care.' *Dent Clin North Am*, 2014; 58: 103-112
- [13] NADGERE j, Doshi AG, Kishore S. ' An evaluation of prosthetic status and prosthetic need amongst people living in and around Panvel, Navi-Mumbai. A survey. *Int J Prosthet Dent*, 2010; 1:6-9

- [14] Soh G, Chong YH, Ong G. 'Dental prosthetic status and needs of an elderly population living in long-term care facilities in Singapore.' *J Community Health* 1992; 17[3]: 175-181
- [15] R Marino H Calache, C Wright et al. 'Profile of the oral health among ambulant older Greek and Italian migrants living in Melbourne; *Am Dental J*, 2007; 62[3]: 198-204
- [16] Karkazis HC, Kossioni AE. Oral health status, treatment needs and demands of an elderly institutionalized population in Athens. *Eur J Prosth. Rest. Dent*, 1993;1[4]:157-163
- [17] Leha I, Martins AB, Abegg C. Oral impact on daily performance: need and use of dental prostheses among Brazilian adults. *J Oral Rehabil*, 2016; 43: 119-126
- [18] Fahad Al-Harbi, Maha E, Tantaw. Normative prosthodontic care need; does it impact the daily life of young Saudis with high level of oral disease? Across-sectional study ' *Buc Oral Health* 2017; 128 doi [181186/s 12903-817-0418]
- [19] Oginni FO 'Tooth loss in a sub-urban Nigerian population. Cause and pattern of mortality revised'. *Int Dent J*, 2005; 55:17-23
- [20] Mukatash GN, Al-Rousan M, AL-Sakama B 'Needs and demands of prosthetic treatment among two groups of individuals. *Indian J Dent Res*, 2010; 21: 564-7
- [21] Vijaya Hedge, R Pandya Sajankumar 'Dental Prosthetic status and prosthetic needs of Institutionalized elderly population in Mangalore, Karnataka, Indi.' *J Oral Res and Review*, 2017; 9: 8-11
- [22] Bader K, Mzarea 'Dental Prosthetic status and prosthetic needs of geriatric patients attending the College of Dentistry. Al Jouf University, Kingdom of Saudi Arabia'. *Eur J Dentistry*, 2017;111[4]:526-530