

ORAL COMPLAINTS AND LEVEL OF SATISFACTION AMONG THE REMOVABLE DENTURE WEARERS – A STUDY

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ABSTRACT

Prosthodontics treatments are associated with oral complaints like speech, mastication, pain, esthetics etc. Oral complaints vary among removable partial denture and complete denture wearers.

The objective of this study was to investigate the common oral complaints and level of satisfaction in removable denture wearers seen to Department of Prosthodontics, Bacha Khan Medical College, Mardan.

Data of oral complaints and level of satisfaction from 100 patients; fifty complete dentures and 50 removable partial dentures were recorded on specially designed proforma. Demographics (age and gender), details of dentures (presence and type of dentures; removable partial denture or complete denture), problems with dentures (wearing, eating, communication, aesthetics, psychological), and satisfaction with dentures were recorded.

The eating and wearing problems were more significant with complete denture as compared to removable partial denture $p < 0.005$. Speaking were more difficult with removable as compared to complete dentures $p = 0.004$. No statistically significant difference was found for psychological between both types of wearers CD wearers were less satisfied with quality and shape of teeth than RPD wearers. Females are less satisfied than males.

Key Words: Prosthodontics, oral complaints, denture, aesthetics.

INTRODUCTION

For more than half a century, missing teeth have been replaced by fixed or removable prosthodontic appliances.¹ In spite of increasing use of dental implants, partial or total edentulousness is still mostly treated by a conventional partial or full denture.^{2,3}

Edentulism is a condition where natural teeth are lost, predominantly as a result of debilitating oral diseases such as dental caries and periodontitis. It is the terminal outcome of a multi-factorial process involving both, biological factors and patient-related factors.⁴ Tooth loss can be disabling and handicapping, since complete tooth loss limits two of the necessary functions for better quality of life (ability to eat and speak) and for some other individuals, it restricts them from participating in social activities and hence affect-

ing their overall quality of life. Further, edentulism is often perceived as the main feature of premature ageing.⁵ Although the prevalence of edentulousness have markedly decreased in developed countries during the last decades by improved dental care, total tooth loss is still a major problem in people aged 65 or older, and the condition needs to be minimized. Life expectancy has increased over the past years, and the number of elderly requiring dentures has also increased.⁶

In developed countries, the proportion of elderly people (those aged 65 years or more) in the population is increasing. There is therefore a need to find better solutions to the problems of elderly people and to improve the quality of their life.⁷ Elderly people face physical, psychological, and intellectual problems. Ageing always has some limitations. These limitations can be seen in deteriorating cognition, sight, hearing, muscle strength, and bone mineral content as well as self-assessment of health. When it comes to oral health, many physical and psychological problems may develop. Oral changes can include tooth loss due to periodontal breakdown, coronal and root caries, tooth surface loss, cusp fracture, xerostomia, and deterioration in the sense of taste.⁸ Elderly people are more likely to wear

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complete or partial dentures. Wearing dentures can affect eating, speech, laughing, facial expression and appearance.⁹

Removable prosthodontics treatment is associated with oral complaints like speech, mastication, pain, esthetics etc. Oral complaints varies among removable partial denture and complete denture wearers.¹⁰ Some authors reported that complete denture wearers were significantly more satisfied with their speech than partial denture users.⁹ Gjengedal¹¹ reported that complete denture wearers avoid hard food items and have less satisfaction with dentures, whereas in the partially edentulous patients have retention problem with maxillary denture. The completely edentulous reported better oral health and satisfaction with their dentures than the partially edentulous. The results of this study suggested that completely and partially edentulous patients differed with regard to denture type. Pain due to an unsatisfactory denture sometimes causes insomnia and some negative changes in eating behaviors. The psychological effects of these problems are commoner in the elderly.¹²

The objective of this study was to investigate the common oral complaints in removable denture wearers (CDs and RPDs) seen in the department of Prosthodontics, Bacha Khan Medical College, Mardan.

METHODOLOGY

This descriptive cross-sectional study was done to determine the oral complaints among denture wearers seen in the Department of Prosthodontics, Bacha Khan Medical College, Mardan from January 2014 to December 2014. A sample of 100 patients (50 complete and 50 removable partial denture wearers) were included in the study by convenient sampling technique. Approval of the hospital ethical committee was taken. The purpose, procedures, risk and benefits of the study were explained to patients. An informed consent and their willingness and participation in the study were ensured. They were assured of maintaining confidentiality of their personal and other data collected from them.

The **Inclusion criteria** were:

Both genders, cooperative patients, age 30-75 years, using removable dentures more than six months and, wearing well designed denture provided by experienced general dentists or Prosthodontists.

The **Exclusion criteria** were:

Patients having mental or psychological problems, using implant supported prosthesis, patient having oral disorders and wearing fixed partial dentures.

Detailed history was taken and examination was performed. The data were collected on a specially

designed questionnaire. Questions were asked and explained to participants by the same examiner. Demographics (age and gender), details of dentures (presence and type of dentures; removable partial denture, and complete denture), oral hygiene measurers (brushing frequency and habits), problems with dentures (usage, eating, communication, aesthetics, psychological), and satisfaction with dentures were recorded. The problems were asked by the examiner.

The resulting data were entered into a statistical software program (Statistical Package for the Social Sciences, version 16.0; SPSS), which was used for all the statistical analyses. Kruskal-wallis test was applied for comparison among different variables of oral complaints related to removable prosthesis. Each problem was compared among CD and RPD wearer.

RESULTS

Out of 100 patients 55 (55%) were males and 45 (45%) were females. The male to female ratio was 1.2:1. The mean age was 51.3 ± 1.4 years with maximum number of patients presenting in the fifth decade of life (27.0%) followed by fourth decade of life (25.0%) (Ref Table 1).

The eating and wearing problems were more significant with complete denture as compared to removable partial denture $p < 0.005$ (Ref Table 2). Speaking were more difficult with RPD as compared to CD $p = 0.004$ (Ref Table 3). No statistically significant difference was present for psychological between CD and RPD wearers (Ref Table 4). CD wearers were less satisfied with quality and shape of teeth than RPD wearers (Ref Table 5). Females are less satisfied than males (Ref Table 6).

DISCUSSION

In recent decades, and despite the attention paid by health professionals to the promotion of oral health, responses for the elderly population have been inadequate or non-existent. It is, therefore, essential to understand their concepts, values and levels of satisfaction regarding oral health so as to adapt interventions to how they experience them.¹³ For most patients, the loss of all teeth represent, first of all, difficulty in chewing and eating.

TABLE 1: AGE DISTRIBUTION

| Age (years) | Frequency | Percentage |
|-------------|-----------|------------|
| 30-40 | 15 | 15.0 |
| 41-50 | 25 | 25.00 |
| 51-60 | 27 | 27.00 |
| 61-70 | 21 | 21.00 |
| 71-75 | 12 | 12.00 |
| Total | 100 | 100.0 |

TABLE 2: FREQUENCY OF EATING AND WEARING PROBLEMS WITH DENTURES

| | | Type of Prosthesis | | |
|---|-----------|--------------------|------------------|----------|
| | | CD ¹ | RPD ² | P-value* |
| Problem with wearing dentures | Present | 8 | 27 | 0.003* |
| | Absent | 38 | 18 | |
| | Sometimes | 4 | 5 | |
| Change in eating habits | Present | 11 | 13 | 0.197 |
| | Absent | 29 | 31 | |
| | Sometimes | 10 | 6 | |
| Biting and Chewing difficulty | Present | 25 | 9 | 0.002** |
| | Absent | 13 | 41 | |
| | Sometimes | 12 | 0 | |
| Food get out of my mouth denture is mobiles | Present | 9 | 5 | 0.002** |
| | Absent | 37 | 43 | |
| | Sometimes | 4 | 3 | |

¹Complete denture (n=50) ²Removable partial denture (n=50) *p<0.005 significant level **significant

TABLE 3: FREQUENCY OF COMMUNICATION PROBLEMS WITH DENTURES

| | | Type of Prosthesis | | |
|---------------------------------|-----------|--------------------|------------------|----------|
| | | CD ¹ | RPD ² | P-value* |
| Difficulty in laughing | Present | 8 | 4 | 0.458* |
| | Absent | 39 | 39 | |
| | Sometimes | 5 | 7 | |
| Difficulty in facial expression | Present | 6 | 5 | 0.352 |
| | Absent | 44 | 39 | |
| | Sometimes | 0 | 6 | |
| Difficulty in speaking | Present | 6 | 3 | 0.004** |
| | Absent | 39 | 47 | |
| | Sometimes | 5 | 0 | |

*p<0.005 significant level **significant

TABLE 4: FREQUENCY OF PSYCHOLOGICAL EFFECTS OF DENTURES

| | | Type of Prosthesis | | |
|-----------------------------|-----------|--------------------|------------------|----------|
| | | CD ¹ | RPD ² | P-value* |
| Decrease in self confidence | Present | 8 | 9 | 0.172 |
| | Absent | 36 | 38 | |
| | Sometimes | 6 | 3 | |
| Pain related sleep problems | Present | 3 | 3 | 0.241 |
| | Absent | 46 | 43 | |
| | Sometimes | 1 | 4 | |
| Bad smell* | Present | 9 | 6 | 0.198 |
| | Absent | 35 | 38 | |
| | Sometimes | 8 | 6 | |

*with clean denture (psychological issue) **p<0.005 significant level

TABLE 5: FREQUENCY OF AESTHETICS PROBLEMS WITH DENTURE WEARING

| | | Type of Prosthesis | | |
|--|-----------|--------------------|------------------|----------|
| | | CD ¹ | RPD ² | P-value* |
| Dissatisfaction about quality of teeth | Present | 6 | 18 | 0.001** |
| | Absent | 42 | 23 | |
| | Sometimes | 2 | 9 | |
| Dissatisfaction about color of teeth | Present | 12 | 15 | 0.0061 |
| | Absent | 36 | 26 | |
| | Sometimes | 2 | 9 | |
| Dissatisfaction about shape of teeth | Present | 6 | 12 | 0.004** |
| | Absent | 44 | 32 | |
| | Sometimes | 0 | 6 | |

*p<0.005 significant level

**significant

TABLE 6: LEVEL OF SATISFACTION WITH DENTURES BY GENDER OF PATIENTS

| Level of satisfaction with removable dentures | Male (n=55) | Female (n=45) |
|---|-------------|---------------|
| Totally not satisfied | 25(45.0%) | 31(68.8%) |
| It is good but sometimes uncomfortable | 10(18.5%) | 5(11.2%) |
| Satisfied | 20(36.5%) | 9(20.0%) |

However, other patients reported they did not have any functional or esthetic problems, and highlighted how much they benefited from tooth extraction and use of dentures. Some patients reported that they have been a victim of prejudice due to lack of teeth, and then faced social problems, such as unemployment. The existence of psychological factors and rejections in interpersonal relationships as a result of the lack of teeth have also been reported.¹⁴

The wearing of a new complete denture may be associated with some complaints especially shortly after the insertion of the denture. The complaints may be lack of retention and stability, pain or discomfort, accumulation of food under the denture, altered speech, difficulty in chewing, unsatisfactory appearance and wretching.¹⁸ Several studies^{16,17} had been conducted on patients' complaints after delivery of complete dentures; however, there was no agreement on the most common complaint. Pain or discomfort was reported by some researchers^{15,16} as the most common complaint among new denture wearers while others stated that lack of retention and stability were the most frequent complaints. In the present study pain, difficulty in chewing, laughing, speech, appearance were most common with complete denture followed partial dentures. Stability was not studied in this study.

Celebić et al¹⁹ compare satisfaction between complete denture (CD) and Kennedy Class I removable

partial denture (RPD) wearers using 156 CD and 112 RPD wearers in his study. Both CD and RPD wearers were mostly satisfied with their dentures. Complete Denture wearers were significantly more satisfied with chewing, speech and retention of maxillary denture than RPD wearers (P<0.05). Removable partial denture wearers were significantly more satisfied with the retention and the comfort of wearing mandibular denture (P<0.05). There was no significant difference between CD and RPD wearers for general satisfaction with their dentures, aesthetics and comfort of wearing maxillary denture (P>0.05). In this study patient have more problems in eating with CDs(50%) as compared to RPDs (22%) in contrast to Celebić's study. But the speaking problems results are in accordance with the current study (Ref Table 3).

Margaret et al²⁰ grouped older adults living in rural areas by denture status, assessed the frequency of wearing dentures during meals, and determines whether denture status or use is associated with dietary quality or the number of foods avoided. A multi-ethnic population-based sample of adults ≥60 years (N = 635) in the rural United States was interviewed. Survey included denture use, removing dentures before eating, and foods avoided due to oral health problems. Dietary intakes were converted into Healthy Eating Index-2005 scores. Sixty percent wore removable dentures of some type; 55% never, 27% sometimes, and 18% always removed dentures when eating. More frequent removal was associated with lower dietary quality. Those with severe tooth loss had the lowest dietary quality and avoided the most foods. In the current study 25(50%) complete wearers have difficulty in eating and chewing and 11(22%) have in change in eating habits to soft food. But the age range and sample size variation is present between the Margaret's and the current study.

Shaoxia et al²¹ studied sex differences in denture satisfaction. They recorded esthetic and chewing responses of patient after 6 and 12 months delivery of implanted supported and conventional dentures. Female patients were less satisfied with dentures. In present study although implanted supported dentures were not included, females were also less satisfied with conventional dentures. As the chewing is much better with implant-supported removable prosthesis, if someone is not satisfied with that sort of prosthesis then this will be more aggravated problem with conventional removable prosthesis. In conflict to the present study, there were no significant differences between men and women in the level of satisfaction with their removable prosthesis in a study by Abouelkomsan.²²

According to the results of Frank's study²³, the most frequent areas of dissatisfaction were as follows: fit (33.6%), mastication (29.5%), natural tooth problems (26.3%), overall perception (26.2%) oral cleanliness (20.4%), speech (17.9%), appearance (17.8%), denture cleanliness (15.3%) and odour (13.2%) . These results are comparable to present result. (Ref Table 2-5)

REFERENCES

- 1 Zlatari DK, Celebic A, Celelic R, et al. The Satisfaction with the Removable Partial Therapy in the Croatian Adult Population. *J Coll Antropol* 2000; 24 (2): 485-94.
- 2 Roumanas ED. The social solution-denture esthetic, phonetics, and function. *J Prosthodont* 2009; 18: 112-15.
- 3 Akeel RF. Effect of the quality removable prostheses on patient satisfaction. *J Contemporary Dent Pract* 20089; 38(8): 604-14.
- 4 Samara SA, Haidar ZS. Re-visiting edentulism: Complete removable dentures vs Implant over dentures. *J Oral Health Comm Dent* 2011; 5(3): 107-09.
- 5 Hutton B, Feine JS, Morais J. Is There an association between Edentulism and nutritional State? *J Can Dent Assoc* 2002; 68(3): 182-87.
- 6 Ameh DA, Ihyasat A. Prevalence of edentulousness in southern Jordan. *Pak Oral & Dent J* 2010; 30(1): 192-98.
- 7 Evren BA, Uludamar A, Iseri U, Ozkan YK. The association between socioeconomic status, oral hygiene practice, denture stomatitis and oral status in elderly people living different residential homes. *Archives of Gerontology and Geriatrics* 2011; 53: 252-57.
- 8 Liedberg B, Stoltze K, Norlén P, Owall B. 'Inadequate' dietary habits and mastication in elderly men. *J Gerodont* 2007; 24: 41-46.
- 9 Celebiæ A, Knezoviæ-Zlatariæ D, Papiæ M, Carek V, Bauciæ I, Stipetiæ J. Factors related to patient satisfaction with complete denture therapy. *J Geront* 2003; 58: 948-53.
- 10 Bekiroglu N, Çiftçi A, Bayraktar K, Yavuz A, Kargül B. Oral complaints of denture-wearing elderly people living in two nursing homes in Istanbul, Turkey. *J Oral Health Dent Manag* 2012; 11(3): 107-15.
- 11 Gjengedal H, Berg E, Boe OE, Trovik TA. Self-reported oral health and denture satisfaction in partially and completely edentulous patients. *Int J Prosthodont* 2011; 24: 9-15.
- 12 Ikebe K, Nokubi T, Ettinger RL et al. Dental status and satisfaction with oral function in a sample of community-dwelling elderly people in Japan. *Special Care Dentistry* 2002; 22: 33-40.
- 13 Cunha M, Santos E, Costa A et al. Oral Health, Literacy and Quality of Life in the Elderly – Systematic Literature Review. *J Comm Dent health* 2014; 4: 121-29.
- 14 Silva ME, Magalhães CS, Ferreira EF. Dental loss and prosthetic replacement expectation: qualitative study. *Cien Saude Colet* 2010; 15(3): 813-20.
- 15 Laurina L, Sobolever U. Construction faults associated with complete denture wearers complaints. *Basic Dent and maxillofac J* 2006; 8(2): 61-64.
- 16 Smith JP, Hughes D. A survey of referred patients experiencing problems with complete dentures. *J Prosthet Dent* 1988; 60: 583-86.
- 17 Kotkin H. Diagnostic significance of denture complaints. *J Prosthet Dent*. 1985; 53: 73-77.
- 18 Dervis E. Clinical assessment of common patient complaints with complete dentures. *Eur J Prosthodont Rest Dent* 2002; 1010: 113-17.
- 19 Celebić A, Knezović-Zlatarić D. A comparison of patient's satisfaction between complete and partial removable denture wearers. *J Dent*. 2003 Sep; 31(7): 445-51.
- 20 Margaret R, Savoca, Thomas A, Arcury et al. Impact of Denture Usage Patterns on Dietary Quality and Food Avoidance Among Older Adults. *J prosthet* 2011; 10: 86-102.
- 21 Shaoxia P, Awad M, Thomson JM et al. Sex differences in denture satisfaction. *J Dent* 2008; 36: 301-08.
- 22 Abouelkomsan AM, Butt AM, Dall AQ. Removable partial dentures: patient satisfaction with associated demographic and biomechanical factors. *Pak oral Dent J* 2012; 32(3): 564-68.