

PATIENTS' SATISFACTION AND QUALITY OF LIFE WITH COMPLETE DENTURES CONSTRUCTED BY VARIOUS CLINICIANS. A CROSS-SECTIONAL STUDY

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ABSTRACT

Edentulism prevalence is high in many developing countries, which dictates replacement with a convenient restoration. Meeting patients' expectations and fulfilling their demands is the supreme criterion for complete denture satisfaction. Appearance and efficiency are the ultimate predominant factors. Patient satisfaction is the key to good quality of life which is a human's birthright.

The aim of this study is to identify the preponderant dimension of patient satisfaction, with special concern for patient perception toward the dentist's experience and professionalism.

Methodology: 116 completely edentulous patients were selected from the outpatient clinic, 58 patients (group I) had their dentures constructed by dental students, and 58 (group II) had their dentures constructed by prosthodontists. A questionnaire-based survey was utilized to detect patients' satisfaction with their dentures and recognize if there was a difference in satisfaction scores among the two groups.

Results: Patients were generally satisfied with their dentures, and most of them had the highest level of satisfaction with denture esthetics and the lowest satisfaction score with eating difficulties. As for satisfaction difference between groups I and II, there was no significant difference found among both groups.

Conclusion: It was concluded that the most common problem experienced by the patients generally was eating difficulties followed by retention problems, then other miscellaneous problems, pain and discomfort, and finally esthetics. As for the difference in the overall satisfaction level among both groups, there was no significant difference between patients treated by dental students and those treated by specialized prosthodontists.

KEYWORDS: Complete dentures, esthetics, complaints, patient satisfaction, quality of life.

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INTRODUCTION

Physical, psychological, and intellectual issues come across elderly people with other problems that can be highlighted in association with aging. Limitations might be recognizable as declining mental capacity, sight, hearing, muscle tones, and bone mineral saturation ⁽¹⁾.

The term Health-Related Quality of Life (HRQL) implies that health problems may have some sequelae on the life quality of the diseased person ⁽²⁾. Poor health or diseases does not inevitably mean poor quality of life. As an example, teeth loss may impair chewing ability, however, it may deplete pain. Consequently, enhance the quality of life for some persons, while regressing it for others ⁽³⁾. The data obtained from (HRQL) measures aids in better comprehending how people perceive oral health needs and what drives them to request health care ⁽³⁾. Research has highlighted that; oral disorders have emotional and psycho-social consequences as serious as other somatic disorders ⁽³⁾.

In the public health context, oral health care assets are decreasing while sophisticated treatment options are growing further. Dental implants utilized to substitute missing teeth are an expensive option in relation to conventional complete dentures, but they demonstrate substantial improvement in oral health-related quality of life, which could justify public funding for this type of treatment ⁽³⁻⁵⁾. Complete dentures are the most frequent form of prosthetic rehabilitation for an edentulous mouth and the best affordable treatment for patients of low-income strata in developing countries ^(6, 7). The supreme challenging dental treatment in day-to-day practice till now is the successful management of complete denture patients, who come up against progressing difficulties with their prostheses ⁽⁸⁾.

Inevitable inconveniences are hardly accepted. Complications in retention and stability, esthetics, chewing, and food amassment under the denture, are the most frequently reported complaints of complete

denture wearers ⁽⁹⁾. Several reasons may be behind these complaints such as patients' expectations of dentures, social pressure, lack of dental awareness, or even negative impact from past dental history ⁽¹⁰⁾. In some cases, complete denture patients may not be ready to accept the limitations of using dentures in comparison with replaced natural teeth ^(11, 12).

Unsatisfactory denture can lead to insomnia and other problematic changes in mastication and social behaviors of an individual ⁽³⁾. low quality of life may be a result of problems with eating and communication with a direct influence on the reduction of self-esteem and social integration ^(13, 14). Post-insertion adjustments conducted by the dentist, are very essential for the rehabilitation of patients with complete dentures to allow for better satisfaction ^(11, 15, 16).

Behavioral treatment during dental sessions can have a positive impact on relieving the anxiety and soreness of the patient ⁽¹⁷⁾. Furthermore, the dentist-patient relationship along with patients' expectations before prosthodontic treatment, are consequential in attaining patients' satisfaction ⁽¹⁸⁾.

This study was carried out to distinguish the key dimension in patient satisfaction from the different satisfaction domains, with special concern about patient perception toward the dentist's experience and professionalism, which may have a psychological effect on patients' level of satisfaction.

SUBJECTS:

Patients' inclusion criteria included those who had constructed complete dentures in the outpatient clinic of Ahram Canadian University, College of Dentistry, removable prosthodontics department. The patients' age ranged from 50-75 years, dentures were constructed in the same laboratory, by the same technique, satisfactory general medical conditions, psychological health, and all of them had their dentures in use for 3-4 months.

The complete denture patients were equally selected, 58 of them had their dentures constructed by dental students under the supervision of prosthodontist instructors (group I), and 58 others had their dentures constructed by specialized prosthodontists (group II).

Exclusion criteria were, those complete denture wearers suffering from any uncontrolled systemic disorder, chronic debilitating conditions, or mental illness.

Each patient signed a written consent indicating the research purpose.

METHODOLOGY:

A cross-sectional questionnaire-based study was adopted for this research, an Arabic version was used, applying the Visual Analog Scale (VAS) to evaluate their satisfaction with their complete dentures. This study was conducted following the Declaration of Helsinki guidelines.

After explaining this research objective to each patient and his willing acceptance to participate in the research, medical and dental history were obtained, also intraoral clinical, and denture examination were carried out.

During history taking, subjects were questioned about denture use duration, and about retention, stability, occlusion, pain, mastication, aesthetics, and oral hygiene associated with the prosthesis according to the questionnaire.

The complaints were categorized as five domains which were pain and discomfort, retention problems, esthetics concern, difficulty in mastication, and miscellaneous other problems. Each domain contained from 3 to 5 questions of the questionnaire.

Each question answer ranged from 0 to 4 in a five-point scoring system, where 0 represents the best satisfaction result and 4 represents the least satisfaction score. Patients also recorded their perception of the dentist's skills and performance.

The mean score of each domain for all the patients was calculated to detect the overall satisfaction difference between domains. Also, the percent score was calculated for each domain. The difference in satisfaction among the two groups (I and II) was also analyzed.

Respondents with higher values were consistent with low satisfaction and quality of life.

The collected data were tabulated and statistically analyzed. Statistical analysis of the obtained data was conducted using the ANOVA (analysis of variance) test to detect the presence of a difference between the means of the five domains.

The Chi-square test was applied to determine the difference between the domains and difference between patients who had students' dentures and those who had prosthodontists' dentures, and the p-value was calculated.

RESULTS

The patient's total number was 116, of them 67 were males and 49 were females. After the categorization of the patients' answers to the questionnaire, the results showed that the P-value was < 0.05 , thus there was a significant difference between the five domains of postinsertion complaints.

Data in Figure (1) shows the mean difference between domains, and Table (1) shows percentage of satisfaction for each domain. Eating difficulties domain was the least satisfying domain, followed by retention problems, then miscellaneous other problems, then pain & discomfort, and esthetics had the best satisfaction level.

Most of the patients' answers to the questionnaire were never, rarely, and sometimes having problems, which indicates high satisfaction scores. The answers indicating low satisfaction scores which are most of the time, and always had the least percentage among the overall scores, this was considered as a high satisfaction level and generally good quality of

life after patients used their complete dentures.

The null hypothesis meaning no difference in satisfaction levels between patients in the two groups, group (I) treated by dental students and group (II) treated by prosthodontists was accepted because P-value was > 0.05 , and there was no significant difference between the two groups, at a confidence interval of 95%. Table (2) and Table (3) shows satisfaction percentages of each domain in both groups (I and II). This indicates nearly the same satisfaction level and quality of life of patients treated by students and those treated by professional prosthodontists.

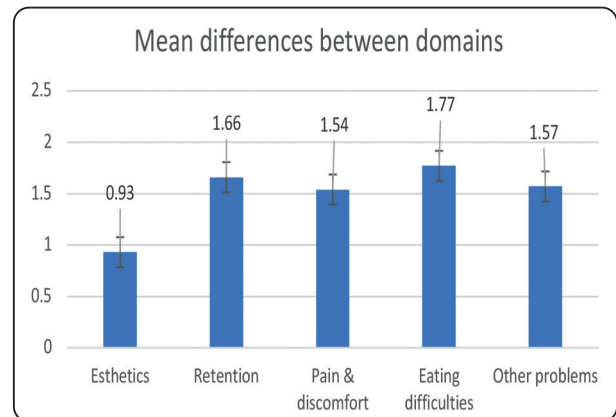


Fig. (1) Shows the mean differences between domains in all patients

TABLE (1) Shows satisfaction percentage for each domain in all patients

Domains	Never (zero)	Rarely (1)	Sometimes (2)	Most of the time (3)	Always (4)
Esthetics	50%	24%	15%	8%	3%
Retention	23%	22%	23%	17%	12%
Pain & Discomfort	17%	27%	29%	14%	7%
Eating difficulty	25%	25%	31%	18%	8%
Other problems	26%	25%	27%	14%	8%

TABLE (2) Shows satisfaction percentages of each domain in Group (I)

Domains	Never (zero)	Rarely (1)	Sometimes (2)	Most of the times (3)	Always (4)
Esthetics	46%	28%	16%	8%	2%
Retention	20%	22%	22%	20%	16%
Pain & Discomfort	17%	29%	26%	20%	8%
Eating difficulty	12%	24%	30%	23%	10%
Other problems	20%	24%	31%	19%	7%

TABLE (3) Shows satisfaction percentages of each domain in Group (II)

Domains	Never (zero)	Rarely (1)	Sometimes (2)	Most of the time (3)	Always (4)
Esthetics	53%	27%	14%	7%	5%
Retention	32%	20%	22%	9%	10%
Pain & Discomfort	28%	26%	24%	13%	7%
Eating difficulty	22%	23%	32%	13%	8%
Other problems	31%	24%	32%	8%	7%

DISCUSSION

The utilization of clinical measures only to evaluate oral health of patients has been condemned, because they don't consider functional and psychosocial features of health, and improperly reflect the functional concerns and perceived needs of individuals^(19,20), which is the ultimate objective of all dental practitioners thus an increased attention to the effect of treatment on patients' quality of life is mandatory.

Questionnaires used to evaluate patient satisfaction, usually are accurately measuring the efficacy and success of the treatment through different prosthetic parameters⁽²¹⁾, that's the reason a five-score questionnaire was used in this study to facilitate the evaluation of the patients' satisfaction with high accuracy.

In this study, the patients were undergoing the survey after 3-4 months of denture construction, as it was declared by another research that, 6 to 8 weeks are necessary to assess satisfaction with the new dentures, as this period has the potential to establish new memory patterns for the masticatory muscles⁽²²⁾.

A previous study stated that the most frequent postinsertion complaint was discomfort and pain due to mucosal injuries and traumatic ulcerations, which was not associated with patient age, sex, or medical status⁽¹²⁾, that result was not in accordance with the results of this study. Meanwhile, another research concluded that respectively difficulty in mastication had the highest percentage (62.3%) followed by loss of taste (32%) and difficulty in swallowing (22.3%) in complete denture wearers⁽²³⁾, which is in agreement with this study of having the highest level of dissatisfaction with ability to eat. Another study stated that the percentage of patients' complaints from adaptation problems was higher than the looseness problem⁽²⁴⁾. A recent study had very near results as those obtained from the present

study which was that, most common problems experienced by patients were pain and discomfort, difficulty with eating, looseness, and esthetics⁽¹²⁾.

Patients are recently influenced by the Social Media applications and are seeking esthetic treatment as an outcome⁽²⁵⁾, fortunately, patients in this study had high satisfaction scores with their denture esthetics which had an influence on self-esteem and enhance their quality of life.

It is the professional responsibility to evaluate and treat the cause of denture problems for a patient's comfort and satisfaction which raises its acceptance rate⁽¹²⁾. Success of complete dentures might be affected by numerous factors, of them is dentist experience and dentist-patient relations^(18,26,27), that is why in the present research the experience and professionalism of the operator were evaluated for their effect on patient quality of life and overall satisfaction.

It was believed that adapting to new dentures is extremely variable, previous patient experience and gender might remain the decisive factors even more than dentist experience⁽²⁸⁾. Some authors' opinion is that the "psychological discomfort" domain reflects psychological capacities, which highlights the significance of the dentist-patient relationship and has greater impact than physical aspects. Although several clinicians and patients believe that the success of dental treatments could be affected by the dentist's experience; however, the results on this issue are inconclusive^(29,30,31).

In the present study putting hands on the difference in patient's satisfaction with different levels of operator's experience, was evaluated. The results indicated that for many reasons, no significant difference was observed in patient satisfaction and quality of life with the complete dentures constructed by dental students and those by professional prosthodontists, and that conclusion was in accordance with other research^(28,29,31).

In accordance with this study's results, a study stated that the high-quality complete dentures provided by experienced dentists may not lead to good patient satisfaction; therefore, it is difficult to evaluate the significance of experience in the denture treatment field⁽²⁸⁾. Some authors' results supporting this study, also found no significant correlation between the dentists' experience and patients' satisfaction with their complete dentures^(28,32), which is the same conclusion of the present study. Meanwhile, another study declares that the emotional reaction of an aged person is affected by subjective factors while the ability to make objective judgment diminishes with progressive senescence, therefore the patient's satisfaction may often be an expression of his feeling of gratitude to the dentist⁽²⁴⁾.

Another study stated that patients treated by dental students found their dentures more efficient than those treated by specialists, which may be due to higher expectations of the patients from the treatment outcome by a specialist which of course affected their overall satisfaction. Above all, students tend to be more passionate and spend long time talking and listening to their patients, furthermore, they are grateful and happy that these patients accepted to give them the chance to treat them which might have been reflected on patients emotionally⁽²⁸⁾. All these factors may be the reason behind the nearly equal satisfaction levels with dentures provided by dental students and those provided by specialized prosthodontists that was observed in the present study.

CONCLUSION

It was concluded from this study that, the general satisfaction of the patients with their dentures was considerably good, and the most common problem experienced was eating difficulties followed by retention problems, then other miscellaneous problems, then pain and discomfort, and finally esthetics. As for the comparison of the overall

satisfaction level among both groups, there was no significant difference between patients treated by dental students and those treated by specialized prosthodontists.

Limitations: several students and prosthodontists were involved in this study, which could have affected the results.

Recommendation: more sophisticated measures are to be undertaken to quantify patients' satisfaction and quality of life with removable complete dentures, also the effect of professionalism of the operator on patient satisfaction must be evaluated on a larger scale.

The author declares no conflict of interest.

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