

# Analysis of the Quality of Life of Elderly Patients With Removable Orthopedic Prostheses

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**Annotation:** The research is devoted to the development of a methodology for orthopedic assessment of the quality of life of elderly patients in need of removable dentures belonging to various social groups of the Bukhara region. Evidence was presented that the proposed method of installing the prosthesis is more effective than the standard one and allows improving the quality of the patient's dental life and speeding up adaptation to removable prostheses. Based on the data obtained on the analysis of the quality of life of elderly and elderly patients of different social groups before and after orthopedic dental treatment. Based on the data noted above, clinical research methods and survey results, recommendations were developed to improve the adaptation of elderly and elderly patients of different social groups to and from removable dentures.

**Keywords:** cephalometry, hypertrophy of the pharyngeal tonsil, children, I and II period of childhood, maxillofacial region.

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## INTRODUCTION

A person's aging is a biological process, just like the aging of other organisms - the gradual degradation of parts and systems of the body and the loss of mental capacity, for example, as a result of this process. Loss of qualifications is of great importance to humans. In addition, the psychological, social economic well-being plays a vital role [Byrsovan R.U. and so on, 2015; Bilhan H. et al., 2013].

People of old age and old age often need medical care, including dental care. Failure to contact a dentist in a timely manner can cause changes in the KPO index and, consequently, partial or complete bite. According to the International Association of Gerontologists, preventing early aging and maintaining the functional and social activity of the population for a long time is a priority of medical science [Cyrus N.W., Korahova U.S.A., 2011; UshovaH KO.A., 2016].

Complete loss of teeth can lead to morpho-functional changes in the entire dental system and a sharp decrease in chewing gum efficiency. Medical, social, and automatic status indicators in older patients are closely linked to dental status. Deterioration of oral health has a negative impact not only on chewing and nutritional function, but also on overall health as well as on the quality of life of patients [Cohen-Carneiro F., et al. 2011; Cornejo M. et al. 2013]

As patients get older, it becomes more difficult for them to undergo orthopedic treatment, while the patient's process of adjusting to the prosthesis lasts longer. The degree of adaptation to the proteins obtained depends on the state of the patient's body, age, absence of related diseases, the functioning of the nervous system, and the psychological state [Khrova O.O. and so on, 2014; Sevbova A.V. and so on, 2016; Take Arai H. et 2012].

The dental status of oral cavity of older patients is an indicator of the social support, lifestyle and general health of this age category of the population. During the period of dental care for patients of this age, it is necessary to take into account not only the age of the patient, but also his social, psychological and physical condition; Севбитов А.В. и соавт., 2014; Bilhan H. et al. 2013].

An external sign of aging of teeth is a change in the color of enamel and the appearance of cracks. The shape of the teeth changes due to friction, the loss of grooves makes the enamel surface smoother [Olesova W.N., 2003].

Quality of Life (Oral Health-Related Quality Of Life, OHRQoL) is a multi-dimensional concept that affects the vitality of oral health or dental diseases and the overall quality of human life [Comagamine Y. et al., 2012; Cornejo M. et al., 2013].

In older people, the association between oral health clinical indicators and quality of life has not been fully studied. According to a number of authors, regular visits to the OHRQoL dentist relate to the socio-economic status [Cicciù M. et al., 2013, Delwel S. et al., 2017; Epiphany E. et al., 2018].

The presence of a large number of healthy teeth and the absence of defects in dental rows have the most reasonable effect on bite OHRQoL, On the contrary, the presence of rotten teeth, defects in dental rows, has an impact on the quality of life [Micin N.E., Thyhonov W.E., Gribin M.I., 2015; Ershew CC and so on, 2017].

Older people who use removable prosthetics are affected by the state of the prostheses they use to quality of life. A number of studies have shown that in people with lower socioeconomy conditions, poor oral health is characterized by clinical and subjective symptoms [Grage D.I., 2012; Ershew CC and Sows, 2017; El Osta N. et al., 2012; Komagamine Y. et al., 2012; Gates W.D. et al., 2014; Klotz A.L. et al., 2017].

According to the authors, the unsatisfactory state of the oral cavity drastically reduces the quality of life, and for 66,3% of respondents living in a nursing home, the condition of the oral cavity caused psychological discomfort. One of the many goals of geriatric medicine is to identify the effects of older people's oral health problems on everyday life, including their impact on quality of life and create as much

convenience as possible [Fuentes-García A., Lera L., Sánchez H., Albala C., 2013; Hsu K.J. et al., 2014; Ershov K.A., Sevbitov A.V., 2018; Epiphenia E., Sanzullo R., Sorrentino R., Ausiello P., 2018].

Oral health problems and socio-economic problems show that individually negative factors lead to less comfort in people's lives and affect quality oral activity [Delwel S. et al., 2017]

**The aim of the study is** to evaluate patients' quality of life by determining the level of orthopedic dental care provided to older and older patients in need of removable dental prosthesis.

**Materials and methods.** The study included patients between the ages of 70 and 80 ( $n = 170$ ), who were divided into 3 groups, depending on their living conditions.

The first group was "Patients living in the House of Women with Disabilities in The District of Bucharest," the second group of patients were citizens living in the care of relatives, and the third group of patients was the patients living in their own household alone. Detailed data on patients in the groups included in the study are listed in Table 1.

The Russian and Uzbek edition of the OHIP-14 questionnaire (Oral Health Impact Profile) (Bahrer G.M. etc., 2007) was used to evaluate the quality of dental life for the patients included in the study. The quality of life of patients was determined twice: before orthopedic rehabilitation and after 33 days of prosthesis. Each answer option is given a certain number of points:

- never - 1 point;
- almost never - 2 points;
- usually - 3 points;
- more often - 4 points;
- very often - 5 points.

Table 1

**Distribution of patients by groups**

Groups	Group 1 "Patients living in Muruvvat House in Bukhara region.		Patients living in the care of a group 2 relative		Group 3 patients living in their household alone	
Sex	men	women	men	women	men	women
Number of patients	25	21	33	34	31	26

To obtain the final total cost of the questionnaire, the points corresponding to the responses of the patients are combined. The honey collection matched the quality of life of the patient:

- from 14 to 28 points - a good standard of living;
- from 29 to 56 points - satisfactory living standards;
- From 57 to 70 points - an unsatisfactory standard of living.

Each patient was given orthopedic treatment with the diagnosis of "Partial secondary adentia". The study was conducted in older and older patients with at least 4 consecutive teeth, with strongly atrophied alveolar abrophyllasms, only a double unlimited defect. In the past, prosthetics were not carried out on these patients, only therapeutic and surgical sanctioned. Rehabilitation work was carried out through partially removable dental prosthesis. For some of the prosthetics in the preparation of partially removable dental prosthetics, Villacril plastic and sunflower teeth called shenshi were used.

Patients were studied in 85 small groups from 2. 1 small group of patients were given dental prosthetics that were partially removed through the usual protocol, i.e. with a standard anatomical spoon, anatomical molding through an alginate mass, preparing a hypersensitivity model, drawing a prosthetic boundary, preparing an individual spoon from acrylic plastic, obtaining a functional requested mold shaped by a silicone mass, preparing a hypersensitivity model, preparing wax boils, determining the height of the teeth and central occlusion, included fastening models to the articulator, picking artificial teeth, adapting the prosthetic wax structure to the patient, replacing the wax structure with plastic, and installing the finished prosthesis in the patient's mouth, prostheses for patients are presented at the picture 1.

In the second small group of patients, prosthesis was conducted using these stages. Unlike only a small group of 1, the individual spoon border, that is, the covered zone, was formed with a thermoplastic mass in the second small group of patients, followed by a molding.

All group patients were surveyed through an OHIP-14 questionnaire providing information about dental quality of life before prosthesis. Considering the results of the survey, you can see that in most patients with small groups of 1 (46% 53.7%), they are not satisfied with the quality of dental life. Satisfactory was found to be 36.4% of patients, and only 8.9% of patients had good dental quality of life. The same was observed in a small group of 2 patients.

Pic. 1



a. Mold obtained in the standard way



b. Mold with a boundary formed with individual thermoplastic mass

The quality of its dental quality of life can be observed in a patient (58% in 62%). Patients with good dental quality of life made up 8.6% of the population in this group, as did the 1st small group. And patients whose quality of life they considered satisfactory accounted for 29.4%. Such results mean that the need for reablation of patients in this category is high. The results of the survey conducted on all patients before prosthesis are presented in Table 2 and Picture 1.

Table 2  
Quality of life indicators (%) of patients with OHIP-14 prior to prosthesis

Life level	Small group 1 n=85(%)	Small group 2 n=85(%)
It's fine	8,9	8,6
Satisfactory	36,4	29,4
Unsatisfactory	53,7	62,0

Both groups were surveyed through a re-OHIP-14 questionnaire after prosthesis by taking mold in two different ways in patients. In both subgroup 1 and subgroup 2, you can see an increase in improvement dynamics. However, the results differed greatly from one another.

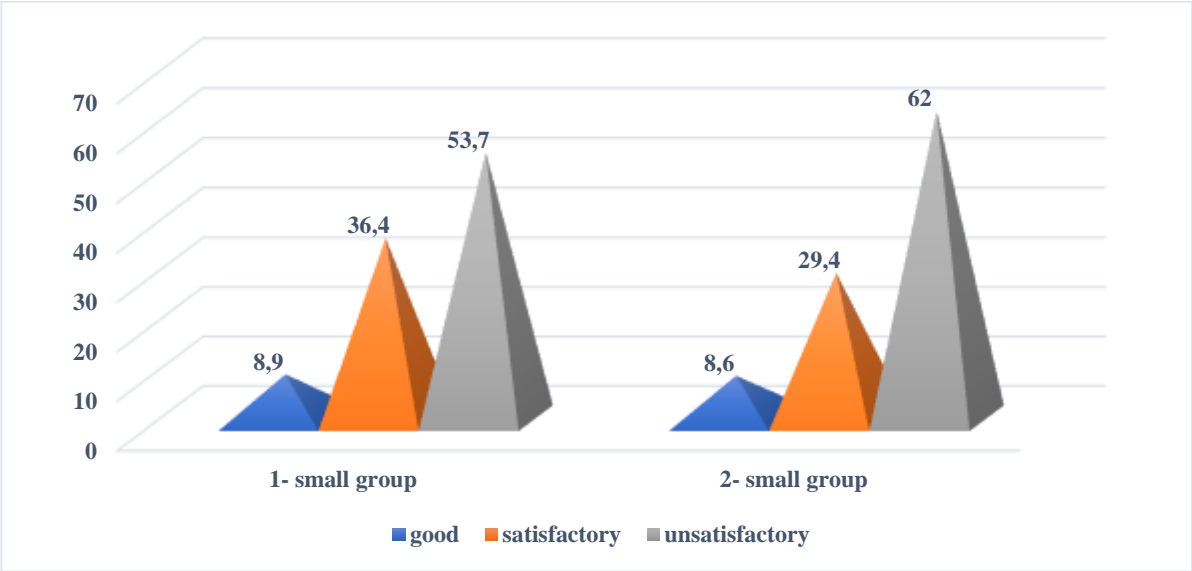
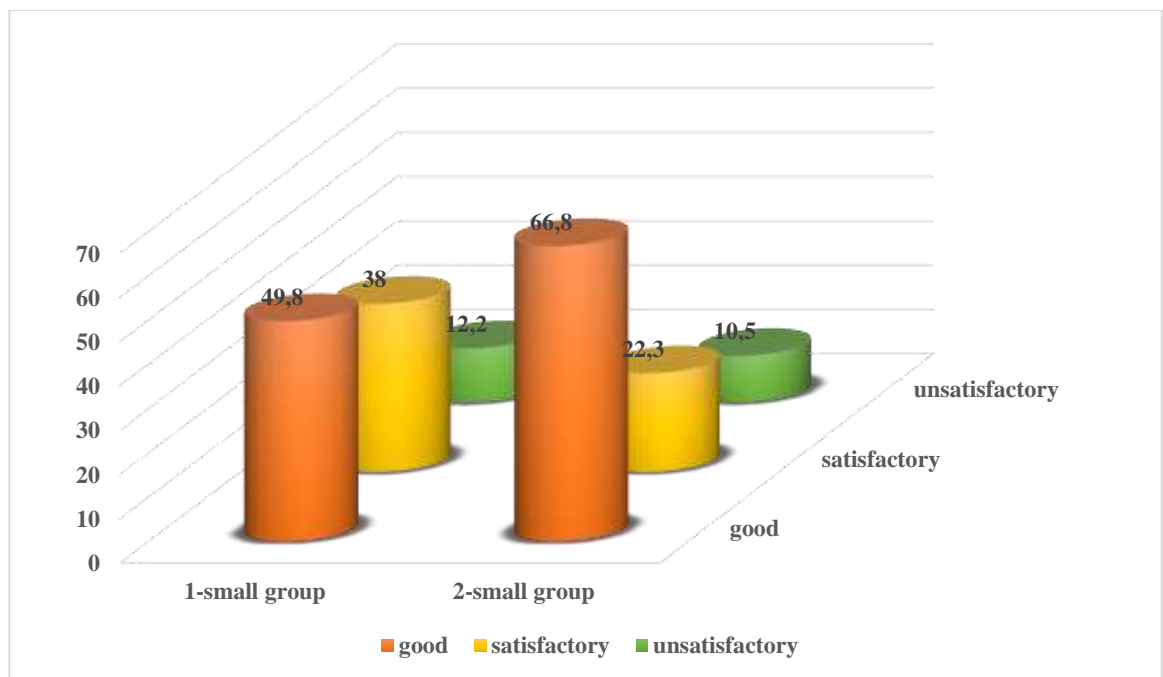


Figure 1. Quality of life (%) patients with OHIP-14 prior to prosthesis

In the 1st small group molded in a standard way, 42 (49.8%) patients (49.8%) rated their quality of life as good, compared with 57 (66.8%) patients in the 2nd small group molded through a modified individual spoon. As its dental quality of life satisfactory, 32 (38.0%) of the 1st small group were patients. Such a result was 19 (22.3%) of patients in the 2nd small group. In our study, the number of people who considered their dental quality of life to be bad made up a very small minority in both small groups, compared with 11nafar (12.2%) in the 1st small group, compared with 9 (10.5%) patients in the 2nd small group.

Thus, good quality of life in a small group of 1 patient can be seen to be good results of the proposed method through improvement of 23.5% and those who consider their quality of life to be good in small groups 2 patients by 28.8%.



**Figure 2. Quality of life of patients by OHIP-14 after prosthesis (%)**

Of the 1 small groups of patients, 18 (21.0%) applied for prosthetic correction, while 5 (6%) of the 2 small groups of patients applied. Evaluation of patients' quality of life after prosthesis is outlined in Table 3 and Figure 2.

An algorithm for providing orthopedic dental care to older and older patients for practical health care based on the patient's living conditions is proposed, allowing each category of patients to take a differential approach.

The use of this algorithm minimizes the stress of patients before orthopedic dental prosthesis, as well as saves time and improves the adaptation of patients of each category to removable dental prosthesis.

Based on the data obtained, data were obtained on quality-of-life analysis of elderly and elderly patients of various social classes before and after orthopedic dental treatment. Based on the aforementioned information, clinical research methods and recommendations were developed to improve the adaptation and adaptation of older and older patients of different social groups to removable dental prosthesis.

**Conclusions.** In the era of determining the specifics of adaptation to dental prosthetics obtained in older patients, they showed that their living conditions, lifestyle and environment affect the duration of the adaptation process to removable prostheses.

After conducting clinical procedures for oral examination among older patients, a higher level of need for orthopedic dental treatment is determined.

In the implementation of orthopedic dental treatment, it is necessary to determine the effect of the patient on prosthetic adaptation and rehabilitation processes and to increase patient satisfaction, taking into account the specifics of his or her living conditions, lifestyle and environment.

Based on the results obtained, it can be said that molding through the modified method of the proposed individual spoon is more useful than obtaining molds in a standard way, and at the same time as the dental patient raises the quality of life, accelerates the patient's ability to get used to the dental prosthesis to be obtained. At the same time, it reduces the number of reapplications to a low-end prosthetic correction.



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