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ORIGINAL ARTICLE / ОРИГИНАЛНИ РАД

Oral health of prosthetic rehabilitated patients with schizophrenia

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SUMMARY

Introduction/Objective Factors such as nature of psychiatric disorder, length of hospitalization and oral-side effects of psychotropic medications may considerably contribute to high prevalence of oral diseases among people with schizophrenia, and a consequent need for prosthetic rehabilitation. The aim of this study was to ascertain the oral health level of prosthetic rehabilitated patients with schizophrenia and to consider their needs for future improvement of prosthetic rehabilitation.

Methods The study group comprised 52 patients with schizophrenia, hospitalized at the Dr Laza Lazarević Clinic for Mental Disorders, Belgrade. The control group comprised 52 patients with no psychiatric medical history, treated at the School of Dental Medicine, University of Belgrade. The oral health indices (Decayed, Missing and Filled Teeth Index – DMFT, Community Periodontal Index of Treatment Needs – CPITN, and the Simplified Oral Hygiene Index – OHI-S), socio-demographic characteristics, smoking habits, oral hygiene habits, and previous dental visits were registered in both groups, as well as medical characteristics of the primary disease in the study group patients.

Results Fifty percent of the study group patients had partial mobile dentures, while almost 30% had fixed dentures, in contrast to the control group patients, who prevalently had fixed dentures. In both groups of patients, a statistical significance was observed between partial mobile and fixed dentures wearers, in terms of DMFT index, carious teeth, CPI modified, and OHI-S. Similarly, a statistically significant difference between the groups was observed concerning fixed dentures in terms of carious teeth, filled teeth, CPI modified, and OHI-S.

Conclusion Multidisciplinary approach is needed for complete oral and prosthetic rehabilitation of this group of psychiatric patients.

Keywords: prosthetic; schizophrenia; oral health

INTRODUCTION

Physical health of patients with schizophrenia seems to receive much attention over recent years because this group of psychiatric patients has been significantly increasing, and they are less likely to receive the level of physical-based care and rehabilitation they need [1]. Also, studies indicate that positive and negative symptoms of schizophrenia correlate with poor quality of life [2, 3]. In addition, the chronicity of the schizophrenia has been attributed to the undesirable consequences that potentially devastate oral health [4].

Oral health is an integral part of the general health. Dental caries that constitutes a significant public health problem worldwide is a common chronic infectious transmissible disease [5]. Apart from poor oral hygiene and diet (in particular, sugar-rich food), many other factors have always been associated with it [5]. Similar to that, periodontitis is microbe-induced inflammatory and multifactorial oral disease, characterized by inflammation of periodontium and loss of the periodontal attachment apparatus [6]. In addition, these changes can lead to serious consequences such as tooth loss and a lower quality of life [7].

Many studies have shown that people with schizophrenia are at an increased risk of poor oral health [8–12]. Factors such as nature of psychiatric disorder, length of hospitalization and oral side effects of psychotropic medications may considerably contribute to high prevalence of oral diseases among this group of psychiatric patients, and a consequent need for prosthetic rehabilitation [8]. However, dental treatment of people with schizophrenia is not an easy task, primarily because they avoid regular visits to dental offices due their financial situation and a neglected maintaining adequate oral hygiene [8]. Poor oral hygiene and dental neglect in this group of psychiatric patients seems to lead to pain and infection processes, negatively impacting not only physical health, but also the quality of life, social functioning, and self-esteem [9].

According to evidence that persons with schizophrenia have a higher number of dental carious and missing teeth than the general

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population, with severe form of periodontitis, poor oral hygiene, and that some of them already have some kind of prosthetic appliance, the aim of this study was to assess the oral health of patients with schizophrenia rehabilitated with prosthetics and to consider options of their needs for future improvements of prosthetic rehabilitation [8–12].

METHODS

Study population

This cross-sectional study was conducted at the Dr. Laza Lazarević Clinic for Mental Disorders, Belgrade (for the study group patients) and at the School of Dental Medicine, University of Belgrade (for the control group of patients), in full accordance with the World Medical Association Declaration of Helsinki. Also, the approval from the ethics committees of both medical institutions was received. All participants or their legal guardians (for the study group patients) were informed through a special brochure (concerning the type of the research, data collection procedure, and other aspects of the study), and they signed the informed consent form before participating in any part of the study.

The study group comprised 52 patients with schizophrenia (18 males and 34 females, aged 25–67 years; mean age 47.56 ± 10.59 years), hospitalized at the Dr Laza Lazarević Clinic for Mental Disorders, Belgrade. The inclusion criteria for entering the study group were that the patients were older than 18 years at the time of the study, diagnosed with schizophrenia in accordance with the 10th Revision of the International Classification of Diseases minimum two years prior to the study, and that they had some kind of oral prosthetic rehabilitation at the time of hospitalization. The exclusion criteria for the study group patients were the primary diagnosis of another mental disorder, hospitalized patients diagnosed with schizophrenia in the period shorter than two years from the time of the survey, patients who were not prosthetic rehabilitated before the study, the simultaneous presence of severe somatic illnesses or severe disability, and inability to communicate or the refusal to cooperate.

The control group comprised 52 patients (19 males and 33 females, aged 19–71 years; mean age 49.10 ± 10.99 years), treated at the School of Dental Medicine, University of Belgrade. They were matched to the study group by the number of participants, sex, and roughly by age. The inclusion criteria for entering the study were patients older than 18 years at the time of the study, with no medical history in terms of mental disorders, and also that they already had some kind of prosthetic rehabilitation. The exclusion criteria were the diagnosis of any psychiatric or somatic illness and the use of drugs that can cause oral changes (antibiotics, antifungals, blood pressure medication, corticosteroids, diabetes medication, etc.) [13].

A questionnaire for both groups of patients was designed in order to record the socio-demographic characteristics (gender, age, educational level, marital status, and residence), smoking habits, oral hygiene habits, and previous dental visits. The data about schizophrenia in the study group were taken from the medical records and included the duration of schizophrenia, number of previous hospitalizations, and current psychotropic medication.

Clinical examination

All the patients were subjected to the thorough dental clinical examination in accordance with the criteria recommended by the World Health Organization [14]. The dental clinical examinations were carried out by two trained and calibrated examiners at the Dr Laza Lazarević Clinic for Mental Disorders in Belgrade, Serbia, and the Faculty of Dental Medicine, University of Belgrade, Serbia, in order to assess the Decayed, Missing and Filled Teeth Index (DMFT index) [14], Community Periodontal Index (CPI) modified [14], and Oral Hygiene Index – Simplified (OHI-S) [15]. In terms of the DMFT index, the examinations were performed in the daylight, using mouth mirror [14]. In addition, clearly visible lesions with cavities on tooth surfaces were registered as caries, teeth with only a change in transparency, but with intact surface and without cavitation were registered as being healthy [14]. In terms of CPI modified, the clinical measurements were performed by using the periodontal CPI probe graded in millimeters on the sextants, scoring on the scale 0–4. In each sextant, all teeth were examined and only the highest value for each sextant was scored and recorded [14]. OHI-S was composed of two components, the Debris Index and the Calculus Index. These indexes represented the amount of debris or calculus found on the preselected surfaces of the indexed teeth [15].

Statistical analysis

All collected data were organized and evaluated using the dedicated software (SPSS Statistics, Version 17.0; SPSS Inc, Chicago, IL, USA) and were analyzed by the descriptive statistical parameters and regression models. The descriptive statistical methods were represented by the measures of central tendency (mean and median), measure of variability (standard deviation and variation interval), and were expressed in the percentages. The methods for testing the difference of numerical data (DMFT index, CPI modified, and OHI-S) were represented by the Mann–Whitney test. For testing the data of different categories (socio-demographic characteristics, smoking habits, oral hygiene habits, and previous dental visits), Person's χ^2 test was used. The level of significance was set at $p \leq 0.05$.

RESULTS

Types of prosthetic appliances in both groups of patients are shown in Figure 1. Fifty percent of the study group patients had partial mobile dentures, while almost 30% had fixed dentures (crowns and/or bridges), in contrast to the control group patients, who prevalently (76.9%) had fixed dentures – Figure 1.

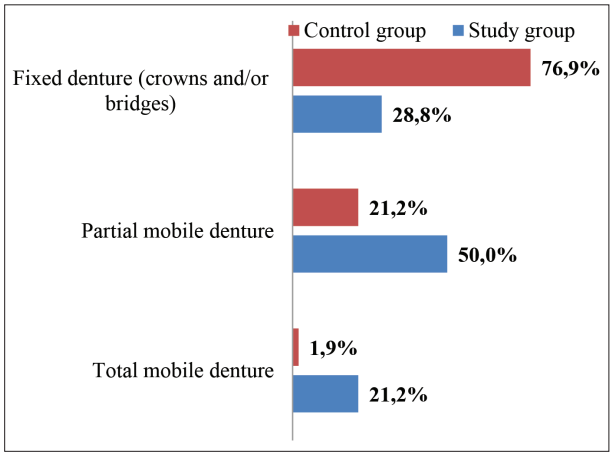

Figure 1. Types of prosthetic dentures in the study group and the control group

Table 1. Socio-demographic characteristics of the study group and the control group

Socio-demographic variables	Obtained values		Significance[a] (p)
	Study group n (%)	Control group n (%)	
Education:			
without school / elementary school	7 (13.5)	2 (3.8)	
junior high school	31 (59.6)	16 (30.8)	
high school	5 (9.6)	11 (21.2)	
university	9 (17.3)	23 (44.2)	0.001*
Employment:			
unemployed			
employed	30 (57.7)	25 (48.1)	
invalid retirement	5 (9.6)	14 (26.9)	
age or survivor retirement	7 (13.5)	2 (3.8)	
	10 (19.2)	11 (21.2)	0.056
Marital status:			
married	6 (11.5)	19 (36.5)	
divorced/separated	5 (9.6)	13 (25)	
unmarried/single	40 (76.9)	17 (32.7)	
widowed	1 (1.9)	3 (5.8)	0.000*
Residence:			
own property	18 (34.6)	26 (50)	
parents' property	25 (48.1)	13 (25)	
rent or other	9 (17.3)	13 (25)	0.005*

*statistically significant;
[a]Pearson's χ^2 test

The distribution of socio-demographic characteristics of both groups is shown in Table 1. The statistically significant differences between the groups were observed for education, marital status, and residence status (Table 1). The educational level of patients with schizophrenia was lower than that of the control group patients. Furthermore, the percentage of employees among the study group patients was significantly lower than that in the control group (Table 1). Also, most of the study group patients lived with their parents, in contrast to the control group patients, who predominantly owned their own homes (Table 1).

In the study group, schizophrenia lasted 17.79 ± 9.59 years (range 2–45 years), and the average number of hospitalizations was 9.54 ± 5.15 (range 1–25 hospitalizations) – Table 2. The patients with schizophrenia were treated with an average of 4.18 ± 1.07 psychotropic medications (range 2–7) – Table 2. Also, the average number of antipsychotics

Table 2. Medical characteristics of the study group

Medical characteristics	Obtained values n (%)
Duration of schizophrenia per patient (in years): [(X ± SD; med (min–max)]	17.79 ± 9.59; 16.5 (2–45)
Number of previous hospitalizations per patient: [(X ± SD; med (min–max)]	9.54 ± 5.15; 8.5 (1–25)
Number of psychotropic medications per patient: [(X ± SD; med (min–max)]	4.18 ± 1.07; 4 (2–7)
Number of antipsychotics per patient: [(X ± SD; med (min–max)]	1.56 ± 0.57; 2 (1–3)
Mood stabilizers:	
no	11 (21.2)
yes	41 (78.8)
Hypnotics:	
no	34 (65.4)
yes	18 (34.6)
Anxiolytics:	
no	7 (13.5)
yes	45 (86.5)
Antidepressants:	
no	48 (92.3)
yes	4 (7.7)
Antiparkinsonics:	
no	22 (42.3)
yes	30 (57.7)

X – mean value; SD – standard deviation

per patient was 1.56 ± 0.57 (range 1–3), and in most cases, patients were also treated with mood stabilizers, anxiolytics, and antiparkinsonics (Table 2).

Most of the study group patients were smokers, brushed their teeth daily, without using oral hygiene aids, in contrast to the control group patients, who were in about 50% smokers, brushed their teeth daily, and used oral hygiene aids in more than 60% (Table 3). In terms of previous dental visits, patients with schizophrenia in most cases visited dentist more than once a year, mostly because of tooth restauration and the pain (Table 3). Patients of the control group visited a dentist in periods shorter than six moths, mostly due to control examinations and dental restoration (Table 3).

In both groups of patients, a statistical significance was observed among partial mobile denture wearers, in terms of the DMFT index, number of carious teeth, CPI modified, and OHI-S (Table 4). The study group patients had significantly higher values of the DMFT index, number of carious teeth, CPI modified, and OHI-S than the control group patients (Table 4). Similarly, a statistically significant difference between groups was observed concerning fixed dentures (crowns and/or bridges) in terms of number of carious teeth, number of filled teeth, CPI modified, and OHI-S (Table 4).

The impact of independent variables (socio-demographic characteristics, characteristics of primary disease, smoking habits, oral hygiene habits and previous dental visits) on oral health indices (DMFT index, CPI modified, and OHI-S) was examined by the linear regression model (Table 5). In terms of the DMFT index, the univariate regression model showed that age, educational level, and the

Table 3. Smoking habits, oral hygiene habits, and previous dental visits of the study group and the control group

Smoking habits, oral hygiene habits, and previous dental visits	Obtained values		Significance[a] (p)
	Study group n (%)	Study group n (%)	
Smoking habits:			
no	13 (25)	24 (46.2)	
yes	39 (75)	28 (53.8)	0.000*
Frequency of brushing teeth:			
no	18 (34.6)	0 (0)	
occasionally	6 (11.5)	0 (0)	
yes	28 (53.8)	52 (100)	0.000*
Tooth brushing technique:			
correct	14 (26.9)	25 (48.1)	
incorrect	38 (73.1)	27 (51.9)	0.000*
Oral hygiene aids:			
no	21 (61.8)	10 (19.2)	
occasionally	13 (38.2)	34 (65.4)	
yes	0 (0)	8 (15.4)	0.026*
Last dental visit:			
less than six months ago	11 (21.2)	23 (44.2)	
six months to one year ago	9 (17.3)	14 (26.9)	
more than one year ago	32 (61.5)	15 (28.8)	0.000*
Reason of the last dental visit:			
control exam	3 (5.8)	17 (32.7)	
tooth restauration	15 (28.8)	19 (36.5)	
pain	13 (25)	0 (0)	
prosthetic rehabilitation	3 (5.8)	1 (1.9)	
oral soft tissue problems	18 (54.5)	15 (28.8)	0.000*

*statistically significant;
[a]Pearson's χ^2 test

use of oral hygiene aids had significant impact on the value of this oral health index (Table 5). However, the multivariate regression model showed that only age of patients had significant impact on the DMFT index value of the study group patients (Table 5). Similarly, univariate regression analysis showed statistical significance of the CPI modified and OHI-S among the study group patients in terms of gender, number of previous hospitalizations, and the use of oral hygiene aids for CPI modified, and tooth brushing technique and oral hygiene aids for OHI-S. In terms of CPI modified, multivariate regression model showed that all three independent variables had a significant impact on the value of this oral parameter. In terms of OHI-S, multivariate regression model showed that only tooth brushing technique had a significant impact on the value of this index (Table 5).

DISCUSSION

The average values of the DMFT index, CPI modified, and OHI-S among patients with schizophrenia who had prosthetic appliances were significantly higher than that of the control group patients, which is in accordance with previous studies [8, 9, 10, 16, 17, 18].

In terms of socio-demographic characteristics of patients with schizophrenia, this study showed that they had lower educational level and were mostly unemployed, unmarried, and lived with their parents, which lead to financial deficit. It is known that patients with schizophrenia have problems with financial competence, leading to deficit in several cognitive functions that have an important role in maintaining an independent social life [19].

In the study group patients, schizophrenia lasted in average 17.79 ± 9.59 years, with the large number of hospitalizations per patient (over 10 on average), which points to the fact that patients were hospitalized for a proportionally long time period, as shown in other studies as well [8, 18]. Also, they were predominantly treated with antipsychotics: typical or first-generation, and atypical or second-generation. Although both groups of antipsychotics block dopamine receptors, atypical ones differ from the typical since they have a more secure profile of neurological side effect and are less likely to cause extrapyramidal symptoms, such as parkinsonism, expressed by muscle rigidity and involuntary and intentional tremors [20]. These deficiencies of the first-generation antipsychotics have a negative effect on fine motor movements and, consequently, on the patient's ability to efficiently brush

Table 4. Oral health indices of the study group and the control group

Dentures	Study group X ± SD; Med (min–max)	Control group X ± SD; Med (min–max)	Significance[a] (p)
Partial mobile denture			
DMFT index	20.96 ± 4.70; 22 (8–28)	15.18 ± 3.03; 16 (10–20)	0.000*
carious teeth	6.31 ± 4.00; 6 (0–13)	0.55 ± 1.21; 0 (0–4)	0.000*
missing teeth	11.42 ± 6.44; 10 (6–23)	10.81 ± 5.10; 11 (5–19)	0.781
filled teeth	3.23 ± 3.50; 1.5 (0–11)	3.81 ± 3.57; 4 (0–10)	0.612
CPI-modified	2.35 ± 0.85; 2 (1–4)	1.00 ± 0.45; 1 (0–2)	0.000*
OHI-S	2.23 ± 0.82; 2 (0–3)	0.36 ± 0.50; 0 (0–1)	0.000*
Fixed denture (crowns and/or bridges)			
DMFT index	14.87 ± 6.52; 15 (5–28)	12.78 ± 5.08; 12.5 (4–24)	0.293
carious teeth	6.80 ± 5.29; 5 (2–20)	1.70 ± 2.05; 1 (0–8)	0.000*
missing teeth	3.87 ± 2.55; 3 (2–10)	2.90 ± 2.55; 3 (1–10)	0.407
filled teeth	4.20 ± 4.04; 4 (0–12)	8.18 ± 4.08; 7 (2–19)	0.004*
CPI-modified	1.87 ± 6.40; 2 (1–3)	0.85 ± 0.92; 1 (0–3)	0.000*
OHI-S	1.67 ± 0.72; 2 (0–3)	0.45 ± 0.55; 0 (0–2)	0.000*

DMFT – Decayed, Missing and Filled Teeth Index; CPI – Community Periodontal Index; OHI-S –Simplified Oral Hygiene Index; X – mean value; SD – standard deviation;
*statistically significant;
[a]Mann–Whitney test

Table 5. The values of oral parametar indices among the study group examined by the linear regression models

Parameters	DMFT index				CPI modified				OHI-S			
	Univariate linear regression analysis		Multivariate linear regression analysis		Univariate linear regression analysis		Multivariate linear regression analysis		Univariate linear regression analysis		Multivariate linear regression analysis	
	#B (95% CI)	p	#B (95% CI)	p	#B (95% CI)	p	#B (95% CI)	p	#B (95% CI)	p	#B (95% CI)	p
Gender	-0.131	0.947	-		-0.677	0.008*	-0.734	0.004*	0.071	0.788	-	
Age	0.300	0.000*	0.360	0.001*	0.019	0.152	-		0.020	0.104	-	
Education	-2.834	0.004*	-1.416	0.160	-0.158	0.270	-		-0.188	0.165	-	
Employment	0.847	0.267	-		-0.034	0.764	-		0.022	0.841	-	
Marital status	-1.472	0.271	-		-0.118	0.556	-		-0.275	0.139	-	
Residence	-0.481	0.657	-		0.036	0.817	-		0.243	0.109	-	
Duration of schizophrenia	0.126	0.195	-		4.281	0.998	-		0.021	0.109	-	
Number of previous hospitalizations	0.162	0.341	-		0.054	0.044*	0.058	0.022*	0.017	0.498	-	
Number of psychotropic medications	0.147	0.846	-		0.181	0.134	-		-0.025	0.836	-	
Number of antipsychotics	0.946	0.564	-		0.369	0.083	-		-0.137	0.525	-	
Mood stabilizers	-3.042	0.180	-		-0.483	0.149	-		-0.286	0.403	-	
Hypnotics	2.595	0.182	-		0.500	0.058	-		0.249	0.355	-	
Anxyolitics	-4.813	0.074	-		-0.175	0.721	-		-0.776	0.069	-	
Antidepressants	3.042	0.384	-		-0.179	0.762	-		-0.049	0.935	-	
Antiparkinsonics	0.570	0.763	-		0.191	0.460	-		0.176	0.493	-	
Smoking habits	-0.612	0.578	-		-0.247	0.094	-		0.008	0.953	-	
Frequency of brushing teeth	-1.019	0.313	-		-0.125	0.383	-		-0.049	0.731	-	
Tooth brushing technique	3.293	0.113	-		0.447	0.083	-		0.728	0.006*	0.750	0.008*
Oral hygiene aids	6.524	0.004*	2.781	0.191	0.804	0.008*	0.775	0.003*	0.785	0.007*	0.505	0.062
Last dental visit	0.768	0.303	-		-0.004	0.965	-		0.164	0.092	-	
Reason of last dental visit	0.451	0.546	-		0.013	0.900	-		0.084	0.393	-	

DMFT – Decayed, Missing and Filled Teeth Index; CPI – Community Periodontal Index; OHI-S –Simplified Oral Hygiene Index;
#B (95%) – unstandardized coefficient B (95% confidence interval);
*statistically significant

their teeth and perform oral hygiene activities [21]. Also, both types of antipsychotics can cause tardive dyskinesia, but atypical antipsychotics, compared to typical ones, are less likely to do so [21]. Tardive dyskinesia is a parafunctional activity of mastication and tongue musculature that can have a negative effect on the teeth and occlusion [21]. Also, both generations of antipsychotics have anticholinergic side effects, including xerostomia or "dry mouth" [22]. As saliva plays a major role in the prevention of dental caries, xerostomia is a significant risk factor for the appearance of dental caries [22]. Moreover, patients with dry mouth often drink carbonated drinks, which increases the risk of caries occurrence even more [22].

Based on linear regression models and statistically significant independent variables (age for the DMFT index; gender, number of previous hospitalizations and oral hygiene aids for CPI modified; and tooth brushing technique and oral hygiene aids for OHI-S), it seems that schizophrenia indirectly affect oral health of patients with this mental disorder, by reducing their motivation and awareness of the importance of oral health.

In the present study, half of the study group patients had partial mobile dentures, while almost 30% of them had fixed dentures (crowns and/or bridges). Choi et al. [23] suggest that dental prosthetic treatment of patients with schizophrenia would seem reasonable with shortened dental bridge, after restauration of four occluding pairs of premolars which provide sufficient occlusal stability and masticatory function. Also, they suggest that older patients, patients with lower education, and the duration of schizophrenia of more than 10 years should be rehabilitated with removable prosthetic appliances [24]. Fixed dentures (crowns and/or bridges) are the first choice for replacing missing teeth in partially edentulous patients [23]. On the other hand, advanced rehabilitation treatments such as dental implants' placement in patients with schizophrenia are insufficiently described in the scientific literature. Dental implants, rather than removable prosthesis, may be favorable for esthetical outcomes in patients with schizophrenia treated under combined surgical and prosthetic rehabilitation planning. This planning should include the fact that general anesthesia in patients with schizophrenia should be limited [23]. Implant placement in local anesthesia should generally be preferred for people with mental disorders; a consultation with psychiatric specialists on conducting the best patient management should be included when patients with schizophrenia need complex and extensive dental extractions [24, 25].

The limitation of this study is a relatively low number of the study group patients. However, there are few prosthetic rehabilitated patients with schizophrenia, having in mind their low socio-economical characteristics. Also, all of them were patients at the Dr. Laza Lazarević Clinic for Mental Disorders in Belgrade. Thus, it can be assumed

that the situation concerning the oral health of this group of psychiatric patients may be much worse in other psychiatric institutions in Serbia.

CONCLUSION

The population of patients with schizophrenia is experiencing, broadly speaking, the same oral health problems and the same barriers in accessing adequate oral care as the mentally healthy population. There is a complex interrelationship between socio-demographic characteristics, schizophrenia, psychotropic medication, and oral health. High costs of dental treatments constitute the main barrier in complete prosthetic rehabilitation of this group of psychiatric patients.

Conflict of interest: None declared.

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Орално здравље протетски рехабилитованих болесника са схизофренијом

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САЖЕТАК

Увод/Циљ Фактори као што су природа психијатријског поремећаја, дужина хоспитализације и орални нежељени ефекти психотропних лекова могу знатно допринети повећаној преваленцији оралних болести код особа са схизофренијом и последичној потреби за протетском рехабилитацијом.

Циљ овог истраживања био је да се установи ниво оралног здравља протетски рехабилитованих болесника са схизофренијом, те размотре могућности и потребе за унапређењем њихове протетске рехабилитације у будућности.

Методе Студијску групу чинила су 52 болесника са схизофренијом, хоспитализована на Клиници за психијатријске болести „Др Лаза Лазаревић" Београд. Контролну групу чинила су 52 болесника, без историје менталних поремећаја, која су лечена на Стоматолошком факултету Универзитета у Београду. Индекси оралног здравља (КЕП индекс, индекс стања периодонцијума у заједници и потребних третмана – *CPITN* и поједностављени индекс оралне хигијене – *OHI-S*), социодемографске карактеристике, пушење, навике у одржавању оралне хигијене и претходне посете стоматологу регистроване су у обе групе испитаника, као и медицинске карактеристике примарне болести код болесника студијске групе.

Резултати Педесет процената испитаника студијске групе имало је парцијалне мобилне протезе, док је готово 30% њих имало фиксне протетске радове, за разлику од контролне групе испитаника, који су претежно (76,9%) имали фиксне протетске радове. У обе групе испитаника уочена је статистичка значајност међу носиоцима парцијалних мобилних и фиксних протетских радова, у смислу КЕП индекса, броја каријесних зуба, *CPITN* и *OHI-S*. Слично томе, уочена је статистички значајна разлика између носилаца фиксних протетских радова у студијској и контролној групи у погледу броја каријесних зуба, рестаурисаних зуба, *CPITN* и *OHI-S*.

Закључак За потпуну оралну и протетску рехабилитацију ове групе психијатријских болесника потребан је мултидисциплинарни приступ.

Кључне речи: протетика; схизофренија; орално здравље