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PERIODONTAL EVALUATION AND SELF-PERCEPTION OF PATIENTS TREATED AT TIRADENTES UNIVERSITY IN SERGIPE/BRAZIL

EVALUACIÓN PERIODONTAL Y AUTOPERCEPCIÓN DE PACIENTES TRATADOS EN UNA UNIVERSIDAD DE SERGIPE/BRASIL

AVALIAÇÃO PERIODONTAL E AUTO-PERCEPÇÃO DE PACIENTES TRATADOS EM UMA UNIVERSIDADE EM SERGIPE/BRASIL

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ABSTRACT

Descriptive and cross-sectional epidemiological studies on the prevalence of oral health conditions in the adult population are highly relevant in contemporary times, as such data are essential for guiding and improving patient care and treatment planning. In this context, the objective of this cross-sectional epidemiological study was to analyze the prevalence of periodontal diseases and the self-perception of oral health in adult patients treated at the Tiradentes University Dental Clinic from August 2018 to the second semester of 2019. This study was approved by the Research Ethics Committee under CAAE number 96052918.4.0000.5371. Periodontal condition was assessed according to WHO guidelines, using the Community Periodontal Index (CPI) and the Periodontal Attachment Loss Index (PIP). To evaluate self-perception and its impact on quality of life, the OHIP-14 (Oral Health Impact Profile) questionnaire was applied.The findings revealed that the most prevalent periodontal conditions were the presence of dental calculus and shallow periodontal pockets, with attachment loss of less than 3 mm. Regarding self-perception of oral health, the OHIP-14 test did not indicate a significant impact of these conditions on the quality of life of the participants, with an average score of 1.2. It was concluded that the patients exhibited poor periodontal conditions, with dental calculus observed in 39.83% of the cases. However, they tended to assess their own oral health positively, which does not reflect their actual periodontal status.

KEYWORDS

Periodontal index, Oral health surveys, and Epidemiology.

RESUMEN

Los estudios epidemiológicos descriptivos y transversales sobre la prevalencia de afecciones de salud bucodental en la población adulta son de gran relevancia hoy en día, ya que estos datos son esenciales para orientar y mejorar la atención al paciente y la planificación del tratamiento. En este contexto, el objetivo de este estudio epidemiológico transversal fue analizar la prevalencia de enfermedades periodontales y la autopercepción de la salud bucodental en pacientes adultos atendidos en la Clínica Odontológica de la Universidad de Tiradentes desde agosto de 2018 hasta el segundo semestre de 2019. Este estudio fue aprobado por el Comité de Ética en Investigación bajo el número CAAE 96052918.4.0000.5371. El estado periodontal se evaluó según las directrices de la OMS, utilizando el Índice Periodontal Comunitario (IPC) y el Índice de Pérdida de Inserción Periodontal (IPP). Para evaluar la autopercepción y su impacto en la calidad de vida, se aplicó el cuestionario OHIP-14 (Perfil de Impacto en la Salud Oral). Los hallazgos revelaron que las condiciones periodontales más prevalentes fueron la presencia de cálculo dental y bolsas periodontales poco profundas, con pérdida de inserción menor a 3 mm. Con respecto a la salud bucal autopercibida, la prueba OHIP-14 no indicó un impacto significativo de estas condiciones en la calidad de vida de los participantes, con una puntuación media de 1,2. Se concluyó que los pacientes presentaron un estado periodontal pobre, observándose cálculo dental en el 39,83% de los casos. Sin embargo, tendieron a calificar positivamente su propia salud bucal, lo que no refleja su estado periodontal real.

PALAVRAS CHAVE

Índice periodontal, Encuestas de salud bucal y Epidemiología.

RESUMO

Estudos epidemiológicos descritivos e transversais sobre a prevalência de condições de saúde bucal na população adulta são de grande relevância na contemporaneidade, visto que tais dados são essenciais para orientar e aprimorar o cuidado e o planejamento terapêutico dos pacientes. Nesse contexto, o objetivo deste estudo epidemiológico transversal foi analisar a prevalência de doenças periodontais e a autopercepção de saúde bucal em pacientes adultos atendidos na Clínica Odontológica Universitária Tiradentes, no período de agosto de 2018 ao segundo semestre de 2019. Este estudo foi aprovado pelo Comitê de Ética em Pesquisa sob o número CAAE 96052918.4.0000.5371. A condição periodontal foi avaliada de acordo com as diretrizes da OMS, utilizando o Índice Periodontal Comunitário (IPC) e o Índice de Perda de Inserção Periodontal (IPP). Para avaliar a autopercepção e seu impacto na qualidade de vida, foi aplicado o questionário OHIP-14 (Oral Health Impact Profile). Os achados revelaram que as

condições periodontais mais prevalentes foram a presença de cálculo dentário e bolsas periodontais rasas, com perda de inserção menor que 3 mm. Em relação à autopercepção da saúde bucal, o teste OHIP-14 não indicou impacto significativo dessas condições na qualidade de vida dos participantes, com pontuação média de 1,2. Concluiu-se que os pacientes apresentaram condições periodontais precárias, com cálculo dentário observado em 39,83% dos casos. No entanto, eles tenderam a avaliar sua própria saúde bucal positivamente, o que não reflete seu real estado periodontal.

PALABRAS CLAVE

Índice periodontal, Pesquisas de saúde bucal e Epidemiologia.

1 INTRODUCTION

According to Leite and Palma (2014), the importance of epidemiological studies in oral health lies in their role in planning public policies for prevention and care within healthcare services. Considering prevalence and severity, the prevention and management of treatment depend on the implementation of public prevention policies. This supports the development of strategies for the prevention, treatment, and control of periodontal diseases, as well as a better understanding of the levels of demand among individuals in need of periodontal care.

In addition, Vilella *et al*. (2016) emphasize the importance of health education in improving an individual's oral well-being, taking into account their ability to process and attain health. In this context, Leite and Pama (2014) highlights that the relationship between the population's health profile and social inequality is a relevant subject in oral health studies, as both periodontal disease and dental caries are more prevalent among socially disadvantaged individuals. This is consistent with the findings of Vilella *et al*. (2016), who explain that individuals with limited access to oral health education—often those from socially disadvantaged backgrounds—tend to have higher rates of oral diseases.

Ramos *et al*. (2016) state that data collection in population health research can be conducted through various methods, including clinical examinations, interviews, questionnaires, or a combination of these approaches, with clinical examinations being considered the gold standard in epidemiological studies. However, such examinations have the disadvantage of being time-consuming, potentially costly, when collected under unfavorable conditions.

Evaluating self-perception of oral health, Rana *et al*. (2024) observed a significant disparity between individuals' self-assessments and their actual clinical oral conditions. Although 80.0% of respondents rated their oral health as "good," clinical examinations revealed moderate DMFT scores (mean 2.95 ± 1.41) and periodontal disease requiring treatment in 89.5% of the participants. The most commonly reported barriers to seeking dental care included lack of knowledge, dental phobia, limited accessibility, and inaccurate self-perception.

Analyzing the aspects highlighted above, we consider it necessary to evaluate the oral health of patients seeking dental treatment at our institution, especially given the convenience of collecting comprehensive and precise dental assessments. This will allow us to evaluate their oral health needs and conditions, enabling improvements in care and referrals. This clinical situation never previously assessed at our institution. We also sought to specifically evaluate periodontal conditions, as there is limited data in the current literature comparing periodontal health and patients' self-perception.

Thus, the aim of this cross-sectional epidemiological study was to evaluate the prevalence of periodontal diseases in the adult population (aged 18 to 59 years), conducted from early August 2018 to July 2019, as well as to assess sociodemographic characteristics and self-perception of oral health.

2 MATERIAL AND METHODS

The epidemiological survey for this study was conducted at the Dental Clinic of a university in the Northeast region. Prior to the start of data collection, examiner calibration was performed using the Kappa index, achieving a minimum agreement level of 95%. The project was approved by the Ethics Committee under CAAE number 96052918.4.0000.5371, and the results presented here are part of this broader project.

As random inclusion criteria, adult patients (over 18 years old) who sought dental care for the first time at the university were randomly selected. These patients were attended to at the Dental Clinic's reception and were automatically scheduled for elective screening. Patients who did not agree to sign the informed consent form, individuals with behavioral disorders that impeded data collection, or those unable to undergo oral examination due to debilitating systemic conditions were excluded. Data were collected from 100 patients who met these criteria. This amount occurred because the demand for random collection had never been previously calculated at our institution, and we could not have predicted the possible quantity in advance.

Data collection was carried out in accordance with WHO recommendations and followed the guidelines established in the SBBrasil 2010 survey (BRASIL, 2012). To assess periodontal disease, the CPI (Community Periodontal Index) and PIP (Periodontal Insertion Loss Index) were used. The evaluation of self-perception and the impact on oral health in adults was conducted using the OHIP-14 (Oral Health Impact Profile) questionnaire. The assessment of sociodemographic profile, systemic diseases, medication use, self-reported oral morbidity, use of dental services, and self-perceived oral health status was also conducted following WHO guidelines.

The collected data were analyzed statistically. Descriptive measures such as median, interquartile range, absolute frequency, and percentages were used to describe the characteristics of the variables and to provide a summary of the data. The Pearson Chi-square test was applied to assess associations between different categorical variables. When sample sizes were small and the assumptions for the Chi-square test were not met, Fisher's exact test was used. Additionally, the Bonferroni Z test was employed for multiple comparisons of proportions. The Shapiro-Wilk test was used to evaluate whether the data followed a normal distribution. Consequently, the Mann-Whitney U test, Kruskal-Wallis test, and

Dunn's test were applied to compare medians between two independent samples, among three or more independent samples, and for multiple comparisons, respectively, in cases where the assumptions of normality and homogeneity of variances were not satisfied. Spearman's rank correlation was used to assess the strength and direction of the relationship between two variables measured on at least an ordinal scale. In the present study, all statistical analyses were performed using the R programming environment (version 4.3.2), and a significance level of 5% was adopted for all hypothesis tests.

3 RESULTS

The results show that the sample consists of 71% females and 29% males, with average number of years of education in the sample was 10.8. Regarding age was 42.7 years, with 45% as Leukodermas, and 43% as Melanodermas. In relation to systemic diseases, 28% of individuals reported having a systemic condition, and 25% reported using medication (Table 1).

Table 1 - This table presents data from a sample of 100 dental patients, including information on sex, age, race, presence of systemic diseases, medication use, and years of education.

	n	%	Mean (SD)	Median [IQR]
Sex				
Female	71	71,0		
Male	29	29,0		
Age	100	100,0	42,7 (9,2)	42,5 [35-51]
Race				
Feoderma	12	12,0		
Leukoderma	45	45,0		
Melanoderma	43	43,0		
Systemic Diseases				
Yes	28	28,0		
No	72	72,0		

	n	%	Mean (SD)	Median [IQR]
Medication Use				
Yes	25	25,0		
No	75	75,0		
Years of Education	100	100,0	10,8 (3,5)	11 [8,5-13]

Legend: n - absolute frequency; % - relative frequency (%); SD - Standard Deviation; IQR - Interquartile Range.
Source: Research data

Table 2 shows that all 100 individuals (100%) reported the need for dental treatment, which is justified by the fact that the sample consists of individuals who sought care at the University's Dental Clinic. Approximately half of the sample (50%) reported not experiencing tooth pain. Among those who reported pain, the average intensity was 3.6, with a standard deviation of 4. Regarding the frequency of previous dental visits, the majority (38%) had consulted a dentist within the past year, most participants (53%) reported using private services and the majority (35%) sought treatment. In terms of satisfaction with oral health, only a small minority (2%) reported being "Very satisfied" with the condition of their teeth, in contrast, 48% reported being "Dissatisfied," and 26% described themselves as "Very dissatisfied.

Finally, the OHIP (Oral Health Impact Profile) score had a mean of 1.2 and a median of 1.1, indicating a self-perception of no significant impact on the quality of life related to poor oral health presented by the examinees. This self-perception shows that the periodontal condition did not have a negative impact on the quality of life of the examinees, given that the impact ranges from an average of zero (0) reflecting no impact to an average of four (4) total impact on the quality of life of the examinees.

Table 2 - This table presents a series of data related to a sample of 100 dental patients, including information on self-perception of oral health conditions according to WHO and OHIP-14.

	n	%	Mean (SD)	Median [IQR]
Do you think you currently need dental treatment?				
Yes	100	100,0		
No	0	0,0		
In the past six months, have you had a toothache?				
No	50	50,0		

	n	%	Mean (SD)	Median [IQR]
Yes	47	47,0		
Don't know/Did not answer	3	3,0		
How intense was the pain?	100	100,0	3,6 (4)	0 [0-7,5]
Have you ever been to a dentist?				
No	4	4,0		
Yes	95	95,0		
Don't know/Did not answer	1	1,0		
When was your last dental visit?				
Less than one year	38	38,0		
One to two years	28	28,0		
Three Years or more	28	28,0		
Not applicable	2	2,0		
Don't know/Did not answer	4	4,0		
Where was your last dental appointment?				
Public service	33	33,0		
Private service	53	53,0		
Health insurance or plan	10	10,0		
Not applicable	3	3,0		
Don't know/Did not answer	1	1,0		
What was the reason for your last dental visit?				
Check-up, prevention, or revision	15	15,0		
Pain	10	10,0		
Extraction	27	27,0		
Treatment	35	35,0		
Other	7	7,0		
Not applicable	3	3,0		
Don't know/Did not answer	3	3,0		

	n	%	Mean (SD)	Median [IQR]
Regarding your teeth/mouth, you feel:				
Very satisfied	2	2,0		
Satisfied	8	8,0		
Neither satisfied nor dissatisfied	15	15,0		
Dissatisfied	48	48,0		
Very Dissatisfied	26	26,0		
Don't know/Did not answer	1	1,0		
OHIP	100	100,0	1,2 (0,8)	1,1 [0,5-1,8]

Legend: n – absolute frequency. % – relative frequency (percentage). SD – Standard Deviation. IQR – Interquartile Range.
Source: Research data

Regarding the Community Periodontal Index (CPI), only 3% of individuals were classified as completely healthy. However, when analyzed by sextant, healthy conditions were observed in 13.6% of the 1st sextant, 38.6% of the 2nd sextant, 8.3% of the 3rd sextant, 12.5% of the 4th sextant, 18.8% of the 5th sextant, 10.1% of the 6th sextant, and 3.0% of the 7th sextant. As for the presence of bleeding only, 4% of individuals were in this condition. When analyzed by sextant, bleeding was observed in 5.7% of the 1st sextant, 11.4% of the 2nd, 6.0% of the 3rd, 3.8% of the 4th, 4.2% of the 5th, 3.8% of the 6th, and 4.0% of the 7th sextant. Calculus was identified in 34% of the individuals. When analyzed by sextant, the presence of calculus was noted in 38.6% of the 1st sextant, 32.9% of the 2nd, 41.7% of the 3rd, 50.0% of the 4th, 67.7% of the 5th, 53.2% of the 6th, and 34.0% of the 7th sextant. Shallow periodontal pockets (4 to 5 mm) were observed in 35% of the patients. By sextant, these were found in 28.4% of the 1st, 12.9% of the 2nd, 31.0% of the 3rd, 32.5% of the 4th, 6.3% of the 5th, 24.1% of the 6th, and 35.0% of the 7th sextant. Deep periodontal pockets (>6 mm) were observed in 24% of the individuals. When analyzed by sextant, they were present in 13.6% of the 1st sextant, 4.3% of the 2nd, 13.1% of the 3rd, 1.3% of the 4th, 3.1% of the 5th, 8.9% of the 6th, and 24.0% of the 7th sextant (Table 3).

Table 3 - Data related to periodontal condition, represented by CPI (Community Periodontal Index) and CAL (Clinical Attachment Loss).

	1º SEXT	2º SEXT	3º SEXT	4º SEXT	5º SEXT	6º SEXT	INDIV.
	N - %	N - %	N - %	N - %	N - %	N - %	N - %
CPI							
Healthy	12 – 13,6	27 - 38,6	7 – 8,3	10 – 12,5	18 – 18,8	8 – 10,1	3 -3,0
Bleeding	5 – 5,7	8 -11,4	5 -6,0	3 – 3,8	4 -4,2	3 -3,8	4 – 4,0
Calculus	34 – 38,6	23 -32,9	35 -41,7	40 – 50,0	65 – 67,7	42 -53,2	34 -34,0
Shallow pocket (4-5 mm)	25 – 28,4	9 -12,9	26 -31,0	26 -32,5	6 -6,3	19 – 24,1	35 -35,0
Deep pocket (≥ 6mm)	12 – 13,6	3 – 4,3	11 – 13,1	1 – 1,3	3 – 3,1	7 – 8,9	24 – 24,0
CAL							
0-3 mm	69 – 77,5	64 – 88,9	59 – 70,2	70 – 87,5	87 – 90,6	62 – 78,5	60 – 60,0
4-5 mm	6 – 6,7	5 – 6,9	12 – 14,3	6 -7,5	4 – 4,2	5 - 6,3	13 – 13,0
6-8 mm	9 – 10,1	2 – 2,8	10 – 11,9	2 – 2,5	5 – 5,2	6 – 7,6	17 – 17,0
9-11 mm	3 – 3,4	1 – 1,4	2 – 2,4	2 – 2,5	0 – 0,0	4 – 5,1	7 – 7,0
12 mm ou +	2 – 2,2	0 – 0,0	1 – 1,2	0 - 0,0	0 – 0,0	2 – 2,5	3 – 3,0

Legend: N = absolute frequency per sextant. % = relative frequency per sextant. INDIV = periodontal condition per individual.
Source: Research data

Regarding the Periodontal Attachment Loss Index (PIP), attachment loss between 0–3 mm affected the majority of individuals (60%). When analyzed by sextant, most individuals exhibited minimal attachment loss (0–3 mm), with the highest prevalence observed in sextant 5 (90%).

Table 4 presents the sociodemographic characteristics in relation to OHIP scores. A statistically significant difference was observed for systemic diseases (p = 0.013), with patients who reported systemic conditions having a higher median OHIP score (1.5; IQR: 0.7–2.0) compared to those without systemic diseases (0.9; IQR: 0.5–1.8). A weak negative correlation was found between OHIP scores and years of education, suggesting that as education increases, the OHIP score tends to decrease. No other variables showed statistically significant results at the 5% level, indicating no evidence that OHIP scores are influenced by those factors.

Table 4 - Correlation between sociodemographic characteristics and OHIP-14 scores.

	OHIP	p-value
Sex, *Median [IQR]*		
Female	1,2 [0,6-1,8]	0,251 [M]
Male	0,9 [0,4-1,7]	
Age, R	-0,07	0,477
Race, *Median [IQR]*		
Fair-skinned (Feoderma)	0,8 [0,5-1,6]	0,653 [K]
Ligh-skinned (Leukoderma)	1,4 [0,5-1,8]	
Dark-skinned (Melanoderma)	1,1 [0,6-1,9]	
Systemic Diseases, *Median [IQR]*		
Yes	1,5 [1-2]	**0,013 [M]**
No	0,9 [0,5-1,6]	
Medication Use, *Median [IQR]*		
Yes	1,5 [0,7-2]	0,187 [M]
No	0,9 [0,5-1,8]	
Years of Education, R	-0,22	**0,025**

Legend: IQR – Interquartile Range. M – Mann–Whitney test. K – Kruskal–Wallis test. R – Spearman's correlation.
Source: Research data

Table 5 presents the characteristics of complaints and self-perception of oral health based on OHIP. Significant differences were observed in OHIP medians between patients who experienced tooth pain in the last 6 months (1.5; IQR: 1–2) and those who did not (0.7; IQR: 0.4–1.4). A positive and moderate correlation was found between OHIP scores and pain ($R = 0.44$; $p < 0.001$), as well as with the reason for the visit ($p = 0.028$). However, the latter did not yield significant results in the multiple comparisons using the Dunn test, suggesting this may be a false positive. No statistically significant results were found at the 5% level for the other variables, indicating no evidence that these factors influence OHIP scores.

Table 5 - Correlation between complaints and oral health perception and OHIP-14 scores.

	OHIP	p-value
Toothache in the past six months, Median [IQR]		
No	0,7 [0,4-1,4]	**<0,001** [K]
Yes	1,5 [1-2]	
Don't know/Did not answer	0,9 [0,4-1,3]	
Have you ever been to a dentist?, Median [IQR]		
No	1,4 [0,8-1,6]	0,706 [M]
Yes	1,1 [0,5-1,8]	
Pain intensity	0,44	**<0,001**
When was the last time you visited the dentist? Median [IQR]		
Less than 1 year	0,9 [0,4-1,7]	0,107 [K]
1-2 years	1 [0,6-1,5]	
3 or more years	1,4 [0,8-2]	
Not applicable	0,8 [0,1-1,4]	
Don't know/Did not answer	1,9 [1,6-2,1]	
Location of last appointment, Median [IQR]		
Public Service	1,1 [0,5-1,8]	0,846 [K]
Private service	1,1 [0,6-1,9]	
Health insurance	1 [0,6-1,8]	
Not applicable	1,4 [0,8-1,4]	
Reason for last appointment, *Median [IQR]*		
Check-up, prevention or revision	0,6 [0,2-0,9]	**0,028** [K]
Pain	1,6 [1,4-2,1]	
Extraction	1,4 [0,9-2]	
Treatment	0,9 [0,5-1,7]	
Other	0,9 [0,5-1,5]	
Not applicable	1,4 [0,8-1,4]	
Don't know/Did not answer	0,4 [0,2-1,1]	

	OHIP	p-value
Perception of last dental treatment *Median [IRQ]*		
Very good	1,1 [0,9-1,4]	0,555 K
Good	1 [0,6-1,8]	
Fair	0,9 [0,3-1,6]	
Poor	2 [0,7-2,9]	
Very good	1 [0,6-1,8]	
Not applicable	1,4 [0,8-1,4]	
Perception of last dental treatment, *Median [IQR]*		
Very satisfied	1 [0,1-1,8]	0,117 K
Satisfied	0,9 [0,4-1,5]	
Neither satisfied nor dissatisfied	0,9 [0,3-1,4]	
Dissatisfied	1 [0,5-1,9]	
Veru Dissatisfied	1,4 [0,9-2]	

Legend: IQR – Interquartile Range. M – Mann–Whitney test. K – Kruskal–Wallis test.
Source: Research data

The statistical tests showed no significant correlation at the 5% level between OHIP, CPI, and PIP. In other words, the self-perception measured by the OHIP test is not correlated with the patient's periodontal condition.

When comparing the correlation between CPI, PIP, and all other collected data, no significant associations were found. In other words, periodontal condition was not significantly correlated with any of the variables analyzed in this study.

4 DISCUSSION

When evaluating the profile of the patients examined in our research, we observed that 71% were female, which aligns with the findings of Gabardo *et al.* (2013), who, in a systematic literature review, noted a predominance of female participants in approximately 20 studies. Our findings are also consistent with several other more recent studies including the SBBrasil of 2023, where 69.46% of adults are female. (VETTORE *et al.*, 2013; BARBOSA, 2015; GABARDO *et al.*, 2015; PRADO, 2015; BARTALOTTI, 2016; NASCIMENTO *et al.*, 2016; BATISTA *et al.*, 2018; ALBUQUERQUE *et al.*, 2019; JESUS *et al.*, 2020; BRASIL, 2025).

According to Jesus *et al*. (2020), in a study conducted in the interior of Bahia, the feoderma phenotype was the most prevalent (58%), which contrasts with our results, where leukoderma was the most common (45%). This discrepancy may be attributed to differences in the racial background of the populations studied. Another possible explanation is that our sample consisted of patients seeking treatment at an undergraduate dental clinic in Aracaju, Sergipe, while the study by Jesus *et al*. (op. cit) involved individuals treated at a health center in Jequié, Bahia—a region with a strong Afro-Brazilian influence. An additional factor to consider is the method of self-reported phenotypic classification, which can raise concerns regarding the accuracy of such declarations. Most studies tend to classify individuals as either white or non-white, which makes direct comparisons challenging. Nevertheless, several authors support our findings (BARBOSA, 2015; PRADO, 2015; BARTALOTTI *et al*., 2016). However, in SBBrasil 2023 (BRASIL, 2025), it was observed that in the northeast region the majority of those interviewed declared themselves to be Brown, with a prevalence of 58.55%, but analyzing the data in Brazil as a whole, 41.68% consider themselves White.

Regarding socioeconomic characteristics, the data from this research show that most individuals in the sample had a family income ranging from R$1,500 to R$2,500. In line with our findings, Vale *et al*. (2013) also reported that the average family income of individuals ranged from R$500 to R$2,500. In a more recent study, Costa and Silva (2020) found that the majority of their sample—pregnant women receiving prenatal care at basic health units in the city of Natal, RS—had a family income of R$1,874.00 (73% of the population) and incomplete elementary education (86% of the population). Similar findings were reported in several other studies (GABARDO *et al*., 2015; PRADO, 2015; NASCIMENTO *et al*., 2016; BATISTA *et al*., 2018; RANA *et al*., 2024).

In terms of education, the majority of patients in our sample had between 12 and 15 years of schooling (36.3%), which is consistent with the findings of Vale *et al*. (op.cit) (56%). Nascimento *et al*. (2016) and Prado (2015), analyzing data from SBBrasil 2010, observed that 50.5% of the population had 9 or more years of schooling—a finding also supported by more recent studies (BARBOSA, 2015; LOCK *et al*., 2023; RANA *et al*., 2024). The data from SBBrasil 2023 showed agreement with ours, where 49.59% of the population has up to high school education (population had more 9 or until 12 years of schooling), and in the Northeast this number rises to 50.33% (BRASIL, 2025).

The main reasons the studied population sought dental care were the need for treatment (35%), dental extraction (27%), and pain (10%), while only a small portion sought care for routine checkups or prevention of oral diseases (15%). These findings align with data from SBBrasil 2010, analyzed by Nascimento *et al*. (2016), which showed that the majority of individuals had visited a dentist more than a year prior (53.9%), primarily for dental treatment (62.6%), and had not experienced pain in the past six months (72.1%).

Interestingly, most participants in our study had also last visited a dentist more than a year ago (56%), with the majority using private services (53%) or health insurance (10%). The Dental Clinic at our university charges only a symbolic registration fee, and treatment is provided free of charge. Therefore, it was expected that this population would rely more heavily on public dental services than the data indicated. This observation suggests that the public sector does not adequately meet the

dental needs of the general population, highlighting the need for improved public policies to enhance access to dental care in our city.

Evaluating the periodontal condition of the individuals in this study, we observed that the most prevalent findings were the presence of shallow pockets (35%) and dental calculus (34%), representing the majority of the individuals analyzed. However, the loss of attachment was most commonly between 0 and 3 mm (60%). Only 3% of the individuals presented with a healthy periodontal condition. Our findings are consistent with those of Nascimento *et al*. (2016), who analyzed data from SBBrasil 2010 and found that 69.6% of the population exhibited some form of periodontal alteration. Supporting our results, Barbosa (2015), in a study of adults from the interior of São Paulo state, observed that 3.8% had periodontal health, 11.5% had bleeding, 58.2% had calculus, 20% had shallow pockets, and only 6.5% had deep pockets. Similar results were reported by Vettore *et al*. (2013), who also analyzed SBBrasil 2010 data and identified bleeding, calculus, and shallow pockets as the most prevalent periodontal conditions. However, in SB Brazil 2023, it showed dental calculus in first place (54.13%) and bleeding in second place (41.53%) in Brazil, and in Aracaju it rose to 55.64% and 41.43% respectively. We can conclude that the individuals in our sample exhibited poor periodontal conditions with significant needs for dental intervention. However, it is important to note that this is a biased sample, as it consists of individuals actively seeking dental treatment.

In line with our findings, Costa and Silva (2020) observed that among pregnant women, regardless of gestational period, the most prevalent periodontal conditions were the presence of calculus and gingival bleeding. Similarly, Baldisserotto *et al*. (2019), evaluating adult Indigenous populations in southern Brazil, found calculus (61.3%) to be the most prevalent condition, followed by gingival bleeding (16%) and shallow pockets (6.5%). These authors also analyzed elderly individuals aged 65 to 74 years and found a lower prevalence of calculus (31.6%) and a higher prevalence of shallow pockets (42.1%) compared to younger individuals. These patterns may help explain the high incidence of shallow pockets in our sample, given the average age of the studied population was 42.7 years. Similar findings were reported by other recent studies (LOCK *et al*., 2023; RANA *et al*., 2024).

Romani (2015) conducted a literature review evaluating periodontal conditions by analyzing the applicability of various periodontal indices. The indices assessed included the CPITN (Community Periodontal Index of Treatment Needs), CPI (Community Periodontal Index), IPI (Insertion Loss Index), and PSR (Periodontal Screening and Recording). The authors concluded that there was a wide variation in measurement values across studies, possibly due to differences in study design and methodology. This underscores the need for standardization in future epidemiological studies to enable meaningful comparisons of data collected in different locations. Nevertheless, the results indicated that the vast majority of the population exhibited gingival bleeding and the presence of dental calculus as the most prevalent periodontal conditions, with few cases of shallow or deep periodontal pockets—findings consistent with our own. Exceptions, in which shallow or deep pockets were more prevalent, were associated with systemic conditions such as cancer, diabetes, smoking, and cardiovascular diseases.

Concerning the variables related to self-perception and oral health impacts, our findings indicated a higher prevalence of individuals who self-reported being dissatisfied or very dissatisfied (74%)

with their oral health status, with 47% reporting pain within the past six months. Our data differ from the data from SBBrasil 2023 in the Northeast region, where only the degree of dissatisfied or very dissatisfied individuals added together was 13.43%. Analyzing in detail, the individuals examined in SBBrasil 2023 in Aracaju who were satisfied (39.34%) or very satisfied (7.87%), or average (38.61%), were also divergent compared to ours. Our satisfied or very satisfied individuals added together was 10%, and the average (3%), were much lower than SBBrasil 2023. This discrepancy likely reflects differences in the characteristics of the populations evaluated, with our sample being biased and composed of individuals who actively sought dental care and were therefore potentially more aware and critical of their oral health condition. In contrast, the SB-Brazil 2023 sample comprised individuals not necessarily engaged in seeking dental services, which may have contributed to a more favorable self-perception of their oral health.

Further analyzing self-perception using the OHIP-14 instrument, Guerra *et al*. (2014), in a study conducted at the Federal University of Juiz de Fora (Minas Gerais, Brazil), observed that adult administrative and technical staff had an average OHIP-14 score of approximately 2.97, indicating a greater impact of oral health on quality of life. These findings differ from ours, in which the mean OHIP-14 score was 1.2, suggesting a substantially lower perceived impact. This discrepancy may be explained by differences in the sociocultural profiles of the populations studied, as our participants were patients seeking free dental care at a university clinic, while those evaluated by Guerra *et al*. (op. cit.) were university employees with likely higher socioeconomic status. Furthermore, the study by Guerra *et al*. (op. cit.) did not include a clinical oral examination to verify whether participants' self-perceptions aligned with their actual oral health condition. Conversely, Albuquerque *et al*. (2019), who assessed students from a Federal Institute in southern Brazil using the OHIP-14, found that oral conditions did not significantly impact the participants' daily quality of life—findings more consistent with ours. These results are concerning, as individuals who do not perceive discomfort or negative effects on their quality of life due to poor oral health may be less inclined to seek dental care. In our sample, poor oral conditions were not reflected in a reported decline in overall quality of life.

When analyzing the individual responses to the OHIP-14, we observed that the answer "never" was the most frequent (54%), while the response "always" was considerably less common (14.07%). Our data are consistent with the findings of Gabardo *et al*. (2015), who evaluated adult individuals in the countryside of Rio Grande do Sul, reported comparable results, with the response "never" being significantly more frequent than the combined total of all other responses (16%). Our findings also align with those of Jesus *et al*. (2020), who reported a low impact of oral health on the quality of life among individuals assessed in a rural area of Bahia, Brazil. The population in that study consisted of adults attending a Family Health Unit, and the OHIP-14 was used to assess quality of life. Similar outcomes have been reported by other authors (LOCK, 2023; RANA, 2024). Collectively, these findings support the notion that oral health conditions may not significantly interfere with individuals' perceived quality of life.

This finding leads us to reflect on the fact that nearly all patients in our study do not perceive themselves as having periodontal problems and, consequently, do not believe such conditions are affecting their social lives. In this context, we performed a correlation test between periodontal status

and self-perception, which revealed no statistically significant correlation. Therefore, we question either the ability of the OHIP-14 instrument to capture a self-perception consistent with the actual periodontal condition in this population, or whether periodontal health indeed has no negative impact on quality of life in this group. Additional statistical analyses were conducted to correlate OHIP-14 scores with all variables in the study, and a significant correlation was observed only with the presence of systemic diseases. This suggests that only systemic health conditions may be associated with perceived quality of life among the individuals evaluated. We conclude that even self-reported dissatisfaction with oral health does not appear to influence quality of life; only the presence of systemic diseases seems to have a measurable impact.

Therefore, we consider it necessary to conduct future studies comparing different methods of assessing self-perception and the impact of oral health on quality of life across various populations, in order to identify the reasons why individuals refrain from seeking preventive dental care. This understanding will support the development of educational strategies aimed at effectively promoting primary health care among diverse population groups.

5 CONCLUSIONS

Based on the data collected in this study, we conclude that the adult individuals treated at the University Dental Clinic in 2018 and 2019 were predominantly female, with a mean age of 42.7 years, leukoderma skin type, an average of 10.8 years of education, and no systemic diseases or continuous medication use. This data can help in designing the profile to be sought and incorporated into healthcare services within our educational institution.

The most prevalent periodontal conditions according to the CPI were shallow periodontal pockets (35% of individuals) and calculus (34%), with clinical attachment loss ranging from 0 to 3 mm in most cases (60%), predominantly localized in sextant 5 (90.6%). This poor periodontal condition was reflected in self-perception assessed using the WHO methodology, with individuals reporting dissatisfaction (48%) or high dissatisfaction (26%) with their oral health. This poor periodontal condition may help in the proper referral and organization of care at this institution.

However, when self-perception was assessed using the OHIP-14 instrument (mean score of 1.2), the results suggested that poor periodontal condition may not significantly impact the quality of life of the individuals evaluated. In this way, we can encourage the relevant bodies within and outside our institution to improve public awareness of the impact of oral health on individuals' quality of life.

We consider it necessary to conduct further studies beyond the university setting to assess the actual oral health needs and conditions of this population, thereby supporting efforts to improve oral health and quality of life among the adult population in our city.

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