

THE INFLUENCE OF ORAL HEALTH ON THE QUALITY OF LIFE OF THE ELDERLY

Abstract

Objective: To evaluate the oral health conditions of elderly patients at the Funorte school clinic. **Methodology:** This descriptive, quantitative, cross-sectional study was conducted using 2023 medical records from the Funorte school clinic at the Amazonas campus, focusing exclusively on an elderly population. A total of 50 records were analyzed. The project was submitted to and approved by the Research Ethics Committee. Collected data were compiled and organized using Excel software. **Results:** Analysis of the 50 records revealed that 62% of participants had chronic conditions, such as hypertension, followed by a significant prevalence of anxiety (46%). Regarding procedural needs, 56% of patients required restorations, and 52% needed dental prosthetics. Additionally, it was observed that most patients (54%) did not complete their dental treatments. **Conclusion:** The assessment of the oral health conditions of elderly patients treated at the Funorte Amazonas school clinic highlighted the need for greater attention to this population. These findings underscore the importance of raising awareness among the elderly about the benefits of regular dental visits and completing proposed treatments, aiming to improve their quality of life and well-being.

Keywords: Oral Health. Quality of Life. Dental Care for the Elderly.

INTRODUCTION

The life expectancy of the Brazilian population has been rapidly increasing since the early 1960s, a period when the age structure of the population began to change (Vaccarezza et al., 2016). There is a notable variability in lifestyle among Brazilian seniors, with more active elderly individuals demonstrating better quality of life across various aspects, including oral health (Santos et al., 2020).

In Brazil, according to demographic data compiled by the Brazilian Institute of Geography and Statistics (IBGE) from 2012 to 2021, the proportion of individuals aged 60 and over

increased from 11.3% to 14.7% of the population. In absolute terms, this segment grew from 22.3 million to 31.2 million people, representing a 39.8% increase over the period. This transformation in the age composition of the Brazilian population highlights a decrease in the proportion of young people and an increase in the share of elderly individuals (Brazilian Institute of Geography and Statistics, 2022).

Aging is a common and inevitable process for all humans. The natural physiological changes it entails can often lead to unavoidable conditions, making care for the elderly go beyond mere assistance to focus on improvement and recovery (Moreira et al., 2013). Aging results from numerous modifications in the body, associated with physical and psychosocial factors developed by individuals. It is a dynamic and progressive process marked by functional, morphological, and biochemical changes that continually transform the body's structure until death (Teixeira et al., 2017).

Most elderly individuals face a high prevalence of tooth loss. Tooth loss is considered one of the most significant oral health problems affecting seniors, recognized as a public health issue that directly influences their quality of life. Its impacts include reduced functional capacities for chewing and speaking, nutritional deficits, aesthetic and psychological issues, and lowered self-esteem and social interactions. In oral health, partial or total edentulism is a significant condition associated with functional and aesthetic impairments, affecting not only the balance of the stomatognathic system but also individuals' overall quality of life (Velasco, 2022).

In Brazil, edentulism has affected 11 million people in recent decades (Janto et al., 2022; Velasco, 2021). This reality underscores the need to enhance the care models provided to the elderly. It highlights the importance of including specific policies for elderly health and investing in personal and social resources to promote healthier lives for elderly patients (De Azevedo et al., 2023).

Oral health is critical to individuals' well-being at all life stages. However, seniors are especially vulnerable to oral health deterioration due to factors such as natural aging and

chronic systemic diseases. Oral health problems in this population can directly impact overall health, increasing the risk of cardiovascular and respiratory diseases and worsening existing conditions like diabetes mellitus (Person et al., 2022).

Oral health problems significantly affect various aspects of life, impacting both physical and mental health. Unfortunately, many individuals lack access to essential oral health information, often addressing only symptoms rather than the root causes, leading to more severe complications (Costa et al., 2023).

Seniors are at risk of chronic oral diseases, including dental infections (e.g., cavities, periodontitis), tooth loss, benign mucosal lesions, and oral cancer. Other common oral conditions in this population include xerostomia (dry mouth) and oral candidiasis, which can cause pseudomembranous candidiasis (thrush), erythematous lesions (denture stomatitis), or angular cheilitis (Freitas, 2020).

These various issues reflect the oral health conditions of the elderly population. As age advances, the incidence of comorbidities and general health problems increases, exacerbated by poor oral health due to inadequate hygiene or lack of simple guidance on oral care (Ferreira et al., 2021).

Despite declining rates of dental caries, periodontal disease, encompassing gingivitis and periodontitis, has become a prominent oral health issue, especially in older populations (Bianchini, 2023).

The association between consistent, appropriate oral health practices and individual well-being positively affects this community. Dentists and other professionals involved in elderly care play a vital role, as do health policies that need regular review. Traditional dental approaches should evolve to improve seniors' quality of life, encourage self-care, and promote enhanced oral health (Araújo, Andrade, & Pinto, 2020). Common oral problems in the elderly include difficulties in chewing, swallowing, reduced saliva production, and taste alterations, all of which can affect overall health (Costa et al., 2013).

It is essential to provide the elderly with aging processes that emphasize quality of life and dental care tailored to their needs, considering the natural pathologies of aging.

Academic research is a crucial resource for evaluating this process. Dental treatments should aim to restore oral health, improving masticatory function, swallowing, speech, and respiration. Integrating oral health into general health and considering the patient's overall condition is critical (Lewkowicz, 2019).

Thus, dentists concerned about their patients' well-being, especially seniors, should stay informed about the specific needs of this age group. Treatment approaches should be holistic, recognizing that this population often faces multiple systemic conditions affecting oral health (Sousa et al., 2013).

MATERIALS AND METHODS

This study is descriptive, employing a quantitative cross-sectional approach, utilizing medical records from the Funorte School Clinic at the Amazonas campus. The research focused exclusively on a population of elderly individuals, analyzing a total of 50 medical records. The objective was to analyze and understand oral health patterns within this age group, aiming to identify specific needs and promote effective interventions to improve their quality of life.

For data collection, records from the database made available by the clinic were evaluated, containing information about elderly patients treated in 2023.

The research project was submitted to the Ethics Committee, and after its approval, the records were selected based on the year of care (2023). Following the clinic's authorization to conduct the research, formalized through the signing of the Institution's Agreement Term (TCI, Appendix A), the representative responsible for the records was contacted to schedule the most convenient days and times for their evaluation.

The collected data were stored, and percentages were calculated using Microsoft Excel spreadsheets.

This study was approved by the Research Ethics Committee of the Associação Educativa do Brasil - CEP/SOEBRAS, under the opinion number 7.080.670 and CAAE: 82876624.9.0000.514, adhering to all criteria outlined in Resolutions No. 466/2012 and 510/2016 of the National Health Council, which regulate research involving human subjects.

RESULTS

From the analysis of the 50 medical records, a slight predominance of women was observed, representing more than half of the participants, with 44% being male and 56% female. Of these, 70% were aged between 60 and 70 years, while the remaining 30% were between 71 and 85 years old.

Regarding medications, the most used were those for hypertension (66%), followed by diabetes (22%). Additionally, a considerable number of patients (16%) were not taking any medication. The most common conditions were hypertension (62%) and anxiety (46%), followed by diabetes (26%). Chronic and inflammatory diseases: Issues such as rheumatism/arthritis (16%) and gastritis (18%) were also prevalent. Conditions such as seizures, heart attacks, osteoarthritis, and ulcers were reported by only 2% of patients, while 10% of patients reported no illnesses.

Table 1: Gender, Age Group Frequency, Medications Used, and Prevalence of Diseases in Elderly Patients Treated at the Funorte Amazonas Clinic.

Category	Details	Percentage (%)
Gender	Male (22)	44%
	Female (28)	56%
Age	60 to 70 years (35)	70%
	71 to 85 years (15)	30%
Medications	Hypertension (33)	66%
	Diabetes (11)	22%
	Painkillers and anti-inflammatory (6)	12%

	Anxiety medication (6)	12%
	Cholesterol medication (4)	8%
	Respiratory disease medication (1)	2%
	Anticoagulants (2)	4%
	Supplements and vitamins (3)	6%
	Rheumatoid arthritis and fibromyalgia (2)	4%
	Thyroid disorder medication (2)	4%
	No medications (8)	16%
Diseases	Hypertension (31)	62%
	Diabetes (13)	26%
	Anxiety (23)	46%
	Kidney disease (7)	14%
	Cardiac problems (6)	12%
	Sinusitis (9)	18%
	Glandular disorders (2)	8%
	Anemia (4)	8%
	Gastritis (9)	18%
	Rheumatic fever (4)	8%
	Pulmonary diseases (3)	6%
	Migraine (6)	12%
	Hepatitis (2)	4%
	Herpes (2)	4%
	Rheumatism and arthritis (8)	16%
	Fainting (3)	6%
	Heart attack (1)	2%
	Seizures (2)	4%
	Neurological problems (2)	4%
	Ulcers (1)	2%
	Osteoarthritis (1)	2%
	Asthma (2)	4%
	No diseases reported (5)	10%

Table 2: Allergies, Hemorrhage, Radiation Treatment Profile, Cancer Diagnosis, Pacemaker Use, and Medical Monitoring.

Category	Response	Percentage (%)
Medication Allergy. Which?	No (43 patients)	86%
	Yes (7 patients): Buscopan, Dipyron, Benzetacil, Anesthetic, Plasio, and Torsilax	14%
Bleeding After Extraction	No (46 patients)	92%
	Yes (4 patients)	8%

Allergic to Food or Products	No (42 patients)	84%
	Yes (8 patients): Cement, Cleaning products, Dust, Soy milk, Calabresa, Old paper, Hypochlorite, Pork, and Bleach	16%
Treatment by Radiation	No (50 patients)	100%
	Yes (0 patients)	0%
Cancer	No (50 patients)	100%
	Yes (0 patients)	0%
Pacemaker	No (49 patients)	98%
	Yes (1 patient)	2%
Under Medical Supervision	No (28 patients)	56%
	Yes (22 patients)	44%

Approximately 86% of patients reported no medication allergies, while 14% reported having allergies. Among the patients, 92% did not experience bleeding after extractions, whereas 8% reported such occurrences. Regarding allergies to foods or products, 84% had none, while 16% reported having some type of allergy. Patients who had or currently have cancer and those who underwent radiation therapy accounted for the same percentage (0%), while those who neither had cancer nor underwent radiation therapy represented 100%. Additionally, 98% of patients do not use a pacemaker, while 2% reported using the device. Of the 50 patients, 56% do not undergo regular medical follow-ups, while 44% receive regular medical care.

Table 3: Use of Bisphosphonates, General and Oral Health, Frequency of Dental Visits, Habits, and Health Conditions.

Category	Response	Percentage (%)
Use of Bisphosphonates	No (49)	98%
	Yes (1)	2%
Health Condition	Good (21)	42%
	Excellent (12)	24%
	Fair (16)	32%
	Poor (1)	2%
Smoking, Alcoholism, Drugs, and Parafunctional Habits	No (36)	72%
	Yes (14)	28%
Hospitalized in the Last 2 Years	No (43)	86%
	Yes (7)	14%

Last Visit to the Dentist	Up to 6 months (22)	44%
	6 months to 1 year (15)	30%
	1 year to 10 years (13)	26%
Frequency of Brushing	Twice a day (23)	46%
	Three times a day (25)	50%
	Four times a day (2)	4%
Use Dental Floss	Yes (34)	68%
	No (16)	32%

Of the 50 patients, 56% do not have regular medical follow-ups, while 44% do. Among them, 66% rate their health as good or excellent, but a considerable portion (32%) considers their health to be fair. Regarding harmful habits, 72% reported no involvement in behaviors such as smoking, excessive alcohol consumption, drug use, or other harmful habits. However, 28% still engage in these behaviors. Hospitalization was reported by 14% of patients, while the majority (86%) had not faced severe health conditions recently. In terms of dental care, 74% of patients visited the dentist within the last 12 months, while 26% had longer intervals between visits. According to the data, 96% brush their teeth at least twice a day, and 68% use dental floss. However, 32% do not use dental floss.

Table 4: Needs Analysis, Dental Treatment Performed, Completed Treatment, Reasons for Treatment Interruption.

Category	Response	Percentage (%)
Individual Assessment	Need for restoration (28)	58%
	Need for endodontic treatment (9)	18%
	Need for prosthesis (26)	52%
	Need for scaling (5)	10%
	Surgery (11)	22%
Treatment Performed	Resin restorations (15)	30%
	Endodontic treatment (root canal) (7)	14%
	Complete, partial, or removable prosthesis (16)	32%
	Scaling (5)	10%
	Surgery (7)	14%
	Cleaning and prophylaxis (8)	16%
	Evaluation (7)	14%

	Referral (6)	12%
Completed Treatment	No (27)	54%
	Yes (23)	46%
Reason for Not Completing Treatment	Patient did not return (20)	40%
	Patient was referred to Postgraduate studies (6)	12%
	Patient had high blood pressure (1)	2%

Among these elderly patients, 56% required dental restorations, and 52% needed dental prostheses. Additionally, 18% required endodontic treatment (root canal therapy), suggesting the presence of infections or deep lesions in the teeth. Scaling was necessary for 10%, and surgery for 22%. The placement of resin restorations and prostheses was performed for 30% and 32% of the patients, respectively. Root canal treatments and surgeries were carried out in 14% of the patients. Cleaning and prophylaxis procedures, essential for maintaining oral health, were performed in 16% of cases. Referrals to postgraduate care accounted for 12% of cases. Completed treatments represented 46%, while 54% of treatments were unfinished. The primary reasons for incomplete treatments were the lack of patient follow-up (40%), the need for specialized care (12%), and high blood pressure in one patient (2%).

DISCUSSION

The gender distribution reveals a slight predominance of female patients (56%) compared to males (44%). This is a common trend in studies involving the elderly, as women typically have a longer life expectancy, consistent with demographic data in Brazil. According to the 2022 IBGE Census, women constitute 51.5% of the general population, while men account for 48.5%. The study shows that 70% of patients attending Funorte's school clinic are between 60 and 70 years old, while 30% are aged 71 to 85. Brazilian demographic studies indicate that most elderly individuals are concentrated in the 60–69 age group, reflecting the onset of population aging in Brazil. The 2022 Census and data from the Brazilian Institute of Geography and Statistics (IBGE) highlight life expectancy

and age structure as factors contributing to the larger proportion of elderly people in this age bracket.

Regarding medication usage (Table 1), the most common drugs used by patients are for hypertension (66%), followed by diabetes (22%). This prevalence aligns with epidemiological data showing high rates of hypertension and diabetes among the elderly. Studies indicate that approximately 80% of Brazilian seniors take at least one continuous-use medication, primarily for managing chronic diseases like hypertension and diabetes (ROZENFELD, 2003). Furthermore, 36% of the elderly engage in polypharmacy (using five or more medications), increasing the risk of drug interactions and adverse effects (SILVA et al., 2012). A significant portion of patients (16%) does not take any medication, potentially reflecting healthier individuals or those with less need for pharmacological intervention.

The most prevalent diseases identified were hypertension (62%) and anxiety (46%), followed by diabetes (26%), suggesting a patient profile with comorbidities requiring ongoing care. Hypertension and diabetes are common among the elderly, as confirmed by IBGE data indicating that 85% of Brazilian seniors have at least one chronic disease. Of these, hypertension affects approximately 50% of seniors, and diabetes is present in about 20% (IBGE, 2019). Studies suggest that anxiety in older adults can be related to fear of dental procedures, past negative experiences, and social isolation, which negatively affect oral self-care (PEREIRA et al., 2019). Additionally, anxiety may influence seniors' perception of their health, increasing feelings of incapacity and hindering adherence to regular treatments (SILVA & ALMEIDA, 2020).

Chronic and inflammatory diseases like rheumatism/arthritis (16%) and gastritis (18%) were also prevalent, which is common due to natural aging and prolonged medication use. Less frequent conditions, such as seizures, heart attacks, osteoarthritis, and ulcers, were reported by only 2% of patients. Notably, 10% of patients reported no illnesses, indicating a small group with a healthier profile.

The majority of patients do not have allergies to medications, foods, or products (Table 2). The low percentage of allergies reflects relatively low allergic risk factors in this population. A 2021 study estimates that 15% of elderly individuals experience adverse drug reactions, primarily due to slower metabolism and multiple comorbidities, which heighten the risk of allergies and drug interactions (PERSEGONA et al., 2021).

The data revealed that 8% of patients experienced bleeding following tooth extractions, while 92% did not. Post-extraction bleeding rates can vary based on patient profiles and associated risk factors, such as anticoagulant use or bleeding disorders like hemophilia and von Willebrand disease.

This study found that none of the patients had a history of cancer or had undergone radiation therapy (100%, Table 2). According to SANTOS et al. (2020), 10% of Brazilian seniors have been diagnosed with cancer, and many undergo radiotherapy, which can lead to oral health complications such as mucositis and osteonecrosis.

Regarding pacemaker use, 2% of patients used this device, a relatively low prevalence consistent with studies reporting about 2% pacemaker usage among elderly patients (SILVA et al., 2020; BOASAÚDE, 2015).

Most patients (56%) do not maintain regular medical follow-ups, which may reflect access difficulties or a lack of awareness about its importance for overall health. Conversely, 44% of patients reported regular medical monitoring (Table 2), which is crucial in old age for managing chronic conditions, monitoring health, and promoting well-being.

In terms of bisphosphonate use, 98% of patients did not use these medications, and only 2% (1 patient) did (Table 3). Similar findings by MONTEIRO et al. (2019) estimate that 6% of seniors take these medications, requiring dental monitoring due to the risk of osteonecrosis, particularly in invasive procedures.

Health self-assessments showed that 66% of patients rated their health as good or excellent, while 32% considered it reasonable (Table 3). These results suggest that

although many perceive themselves as healthy, a significant portion requires additional care or improvements.

Most patients (72%) reported no engagement in harmful habits such as smoking, excessive alcohol consumption, or drug use, while 28% still exhibited these behaviors, posing potential risks to general and oral health (Table 3). A 2018 Ministry of Health survey reported that 11% of seniors smoked and 10% consumed alcohol regularly, behaviors linked to increased risks of systemic and oral diseases.

A low hospitalization rate (14%) indicates that most patients did not face severe health conditions recently (Table 3). This could suggest a relatively healthy or well-controlled population.

About 74% of patients visited a dentist in the past 12 months, reflecting a positive attitude toward oral health. However, 26% reported longer intervals between visits (Table 3), indicating a need for increased awareness of the importance of regular dental check-ups. In terms of oral hygiene, 96% of patients brushed their teeth at least twice daily, a positive practice for oral health (Table 3). A similar study found that approximately 80% of seniors brushed their teeth twice daily. Additionally, 68% used dental floss, essential for removing debris between teeth. However, 32% did not use dental floss, increasing their risk for issues like gingivitis and plaque buildup.

This study highlighted that most seniors required restorations (56%) and prostheses (52%), indicating dental caries or tooth loss, common in this age group. According to the 2010 SB Brasil survey, about 53% of seniors had at least one cavity and significant prosthetic needs.

Treatments included resin restorations (30%) and prosthesis placement (32%), reflecting earlier findings. Root canals and surgeries were performed on 14% of patients each, indicative of more complex dental conditions (Table 4). Cleanings and prophylaxis were conducted in 16% of cases, emphasizing the need for preventive practices.

Only 46% of treatments were completed, while 54% remained unfinished, underscoring the importance of strategies to encourage patient follow-up and treatment continuity. The main reason for incomplete treatments was patient non-return (40%), potentially due to financial, mobility, or access barriers or a lack of awareness about the importance of completing treatment. Elevated blood pressure in one patient (2%) also influenced dental care, highlighting the impact of systemic conditions on treatment outcomes (Table 4).

Research by MARTINS et al. (2019) suggests that treatment discontinuation is common among seniors, as oral health often takes a backseat to other medical priorities. This can lead to interruptions when symptoms subside, ignoring the need for comprehensive care to prevent future issues.

CONCLUSION

The results demonstrated that the evaluation of oral health conditions among elderly patients treated at the Funorte Amazonas school clinic highlighted the need for greater attention to this population. The findings indicated a high prevalence of issues such as tooth loss, dental caries, and poor oral hygiene, often associated with chronic health conditions. Among the diseases, hypertension was the most frequent, followed by a high incidence of anxiety. The significant prevalence of anxiety underscores the importance of psychological support, as this condition can negatively affect both quality of life and adherence to dental treatment.

Additionally, it was observed that most patients did not complete their dental treatments, potentially due to emotional factors such as anxiety and fear, as well as physical and economic limitations. These findings emphasize the need to raise awareness among the elderly about the importance of regular dental visits and completing proposed treatments to improve their quality of life and overall well-being.

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