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Research Article

Use of Dental Services and Oral Health-Related Quality of Life in Preschool Children

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Keila Lais Carrera da Hora, Tatiana Frederico de Almeida, Maria Cristina Teixeira Cangussu*

Abstract

Background: Oral health issues, particularly cavities, significantly impact children's eating, sleeping, speech, and overall well-being. The COVID-19 pandemic has worsened these problems by increasing disparities in access to dental care.
Aims: To analyse the use of dental services and their impact on oral health-related quality of life (OHRQoL) in preschool children in Salvador, identifying associated factors.
Methods: A cross-sectional study was conducted among 523 children aged 26 to 80 months enrolled in municipal public daycare centres in Salvador, BA. Oral health assessments and a caregiver questionnaire were used to collect sociodemographic data, dietary and oral health habits, and dental service use. OHRQoL was assessed using the B-ECOHIS. Descriptive and multivariate analyses were performed using linear regression at the 95% significance level.
Results: The prevalence of caries was 41.87%, and the use of dental services during the pandemic was low (13.58%). Age, family income, dental caries, and fear/anxiety were significantly associated with the B-ECOHIS, highlighting inequalities in access to services and in children's oral health-related quality of life (OHRQoL). There was no association between dental service use and OHRQoL.
Conclusion: The COVID-19 pandemic reduced preschoolers' use of dental services, worsening OHRQoL and highlighting social inequalities and the need for equitable preventive oral health care.

Keywords: Oral health; Quality of life; Preschool; Dental services

1. INTRODUCTION

A person's quality of life is determined by their objectives, aspirations, living standards, personal concerns, and the cultural context and values in which they are embedded. Due to its effects on nutrition, sleep, speech, child development, and the well-being of children and their families, measuring how oral health, particularly dental caries, affects quality of life in early childhood constitutes a significant public health problem (Abanto et al, 2014; Cangussu et al 2016; Zaror et al, 2022). This is because one of the most common chronic illnesses in this age range is still early childhood caries, which is defined by the presence of carious lesions in children under the age of six. (Zou et al, 2022; Cangussu et al, 2016). In addition to caries, conditions such as dental trauma, premature loss of deciduous teeth, and malocclusion can also compromise essential functions, thereby negatively affecting oral health-related quality of life (OHRQoL) (Abanto et al. 2014; Cangussu et al. 2016).

The assessment of OHRQoL in childhood is primarily based on parental or caregiver perceptions, as children's communication skills are still developing. Studies show that unfavourable oral conditions are associated with pain, irritability, feeding difficulties, sleep disturbances, school absenteeism, and family distress, underscoring the importance of oral health for a child's overall development (Abanto et al., 2014; Carneiro et al., 2023; Alanzi et al., 2026; Kurt et al., 2025).

Social determinants of health, such as family income, parental education, housing circumstances, eating habits, and access to dental care, are closely linked to dental caries. The condition is more common in socially vulnerable groups, and their oral health outcomes are worse (Asiri et al., 2024; Brasil, 2012, 2024). In the SB Brasil 2010 survey, only 46.4% of five-year-old children were free of dental caries (Brasil, 2012). The SB Brasil 2023 survey showed a slight improvement in this indicator, although 41.25% of children still had untreated cavities (Brasil, 2024). In Salvador-BA, a

study conducted among preschoolers found a caries prevalence of 36.5%, mainly associated with socioeconomic factors, a cariogenic diet, and limited access to dental care (Leal et al., 2024; Silva et al., 2023). Social, economic, and organisational factors also influence access to and use of dental services. Despite the advances promoted by the National Oral Health Policy and the expansion of Oral Health Teams in Primary Health Care, significant inequalities persist in access to services, especially among low-income populations, residents in vulnerable areas, and preschool-aged children (Alfaya, 2021; Chisini et al, 2021). There is a high prevalence of young children who have never used dental services, and demand is predominantly driven by pain or curative needs, to the detriment of preventive care (Da Motta et al., 2023; Santos et al., 2023).

This situation was exacerbated by the COVID-19 pandemic, which significantly reduced elective dental care and interrupted preventive and educational oral health initiatives. This affected children in socially vulnerable situations in particular, worsening oral conditions, increasing unmet demand for dental treatment, and widening health disparities, all of which affected the quality of life of children and their caregivers (Chisini et al., 2021; Da Motta et al., 2023). Studies evaluating the relationship between dental service use and oral health-related quality of life among preschoolers in the post-pandemic context, especially among socially vulnerable populations, remain limited. Therefore, the present study aimed to analyse the use of dental services and their impact on oral health-related quality of life among preschoolers in Salvador-BA, and to identify factors associated with the use of these services and OHRQoL in this population.

2. METHODOLOGY

This cross-sectional study was conducted with preschoolers in the municipality of Salvador, Bahia, Brazil, in 2022 and 2023, to investigate the use of dental services and oral health-related quality of life (OHRQoL). The study was approved by the Research Ethics Committee of the Faculty of Dentistry of the Federal University of Bahia (CAAE: 60817222.6.0000.5024).

The study population consisted of children aged 2 to 6 years enrolled in Municipal Early Childhood Education Centres (CMEIs) in Salvador, BA. Seven CMEIs, located in six health districts, were selected by convenience sampling from among 14 eligible units. The sample size calculation considered an event proportion of 30%, a minimum risk ratio of 1.3, a statistical power of 80%, a significance level of 95%, and a design effect of 1.5, yielding a minimum sample size of 388 preschoolers.

Children aged 2 to 6 years who were present at the time of data collection, whose parents or guardians completed the self-administered questionnaire and signed the Informed Consent Form, were included. Children outside the established age range, with disabilities or physical and/or mental impairments that made it impossible to perform the clinical examination, or without authorisation from their guardians, were excluded.

This study used a pre-existing database from research conducted in public CMEIs (Municipal Centres for Early Childhood Education) in Salvador, Bahia, with authorisation from the Municipal Department of Education. Data collection was carried out through an oral clinical examination and a structured questionnaire administered to parents or guardians. The questionnaire included sociodemographic information, dietary and oral health habits, lifestyle, food security, and use of health services. Oral examinations assessed dental caries, enamel defects, dental trauma, and occlusal alterations. Data collection was performed by dentists and faculty members from the School of Dentistry of the Federal University of Bahia (UFBA), who had been previously trained and calibrated. Inter- and intra-examiner agreement was verified using the Kappa test, with values above 0.90. The examinations adhered to the World Health Organisation's biosafety standards, including the use of personal protective equipment and disposable wooden spatulas.

The independent variable was the use of dental services, assessed by the question "Have you used dental services during the pandemic?" (yes/no). Only for descriptive aspects, "seeking dental care for the child," was categorised as: no, yes, private care or health plan, and yes, public care.

The dependent variable was OHRQoL (WoHOQOl Group, 1995), measured using the Brazilian Early Childhood Oral Health Impact Scale (B-ECOHIS). The questionnaire consists of 13 items distributed in two sections: impact on the child (9 items) and impact on the family (4 items). Responses ranged from 0 ("never") to 4 ("very frequently"), including the option "I do not know" (Table 1). The total score was calculated by summing the codes for the response options in the impact-on-the-child and impact-on-the-family sections. Total and domain scores were calculated from the sum of the response codes. "I do not know" responses were counted but excluded from the calculation of total scores and domain scores for each respondent. The minimum score on the questionnaire is 0, indicating that oral health does not influence preschoolers' quality of life, while the maximum score is 56, indicating a strong influence of oral health on children's quality of life. The total sum of the questionnaire scores was categorised as follows: no impact, when the sum of the results was equal to zero; weak impact, when the sum was > 0 and ≤ 18.67; medium impact, when the sum was > 18.67 and ≤ 37.34; and strong impact, when the sum was > 37.34 and ≤ 56.

Sociodemographic covariates included sex, age, skin colour, maternal education, family income, and COVID-19 history. Variables related to oral health, such as dental caries and dental abscesses, were also considered, as were variables related to the pandemic's impacts, including changes in diet, fear or anxiety, toothache, and verbal or physical aggression. Dental caries severity was assessed using the dmft index,

categorised as caries-free (dmft=0), low severity (dmft=1–5), and high severity (dmft>6).

The data were entered into a Microsoft Excel database and analysed using Minitab 17. Initially, descriptive and exploratory analyses were performed. After the descriptive analysis, the Kolmogorov–Smirnov test was used to assess whether the data were normally distributed by comparing the sample empirical distribution with the expected normal distribution. This test provides an objective evaluation of normality and is commonly used in the diagnostic assessment of regression models. Once normality was established, a Student's t-test was used to investigate possible associations between OHRQoL and dental service use. In this bivariate stage, variables with $p < 0.20$ were selected for the multivariate model.

Subsequently, a multivariate linear regression analysis was performed using the backward method, based on a saturated model, considering all potential confounding variables identified in the previous stage. Variables with p-values ≤ 0.05 were included in the final model. For collinearity assessment, the Variance Inflation Factor (VIF) and tolerance values were used in the multivariate model; VIF values greater than 5 or 10 and tolerance values less than 0.20 were considered indicative of significant collinearity. Strongly correlated variables should be reassessed for simultaneous inclusion in the model, prioritising those with greater theoretical and epidemiological relevance. The adequacy of the linear regression model was assessed through diagnostic analyses of model assumptions. Residual normality was evaluated using graphical inspection of Q–Q plots and residual histograms. At the same time, homoscedasticity was examined by plotting residuals against fitted values and assessing the constancy of residual variance. The independence of residuals was verified through residual pattern analysis. Multicollinearity among independent variables was assessed using the Variance Inflation Factor (VIF), with values below 5 indicating an acceptable level of collinearity.

Table 1. - B-ECOHIS Instrument (questionnaire) - Oral Health-Related Quality of Life (OHRQoL) (Martins Jr et al. 2012)

Categorization 0-Never; 1-Hardly ever; 2-Occasionally; 3-Often; 4-Very often; 5-Don't know	
Child subscale	**Family subscale**
Pain in the teeth or jaws Difficulty drinking liquids	Dental problems caused a financial impact on the family.
Difficulty eating Difficulty speaking Difficulty attending school	Felt upset
Difficulty playing Difficulty sleeping	Felt guilty
Avoided smiling Irritability due to dental problems	Had to miss work

3. RESULTS AND DISCUSSION

3.1 Results

Participating in this study were 523 preschool children, aged 26-80 months, with a mean age of 54 months, residing in Salvador, BA, and enrolled in municipal public daycare centres. Table 1 shows the characteristics of the study population. The population consisted of 51.82% female children. The majority were over 54 months old (52.2%) and predominantly Black or mixed-race (90.63%). Regarding the mothers, most had completed high school (80.31%). As for family income, 74% of the sample received up to 1 minimum wage. Most of the study population (92.35%) was not affected by COVID-19. Regarding the oral health conditions observed, 41.87% of the children had dental caries, and only 0.38% had a dental abscess. Regarding the impacts on oral health-related quality of life (OHRQoL) in the study population, 15.11% of the children experienced toothache during this period, 24.86% reported impacts on their eating habits, and 22.75% reported fear or anxiety. Reports of verbal or physical aggression by adults towards children occurred in approximately 5% of the study population. Regarding dental services, 86.42% of the children did not use/attend dental services. Furthermore, 84.32% of the study sample did not seek dental care when needed. Of the 82 children who sought dental services, 10.33% sought private services or health insurance, and only 5.35% sought public services (Table 2).

Table 2. Sociodemographic characteristics, oral conditions, and pandemic-related impacts among preschool children in Salvador-BA (2022–2023) N = 523

Characteristics	N	%
Skin color		
Black/ Brown	474	90.63
Others	49	9.37
Age (in months)		
Until 54 months	250	47.80
Up to 55 months	273	52.20
Gender		

Characteristics	N	%
Female	271	51.82
Male	252	48.18
The child had COVID-19.		
Yes	40	7.65
No	483	92.35
Mother's education		
Until an incomplete high school	420	80.31
Up to complete high school	103	19.69
Familiar income		
Until 01 minimum wage	387	74.00
01 minimum wage or more	136	26.00
Dental caries		
Yes	219	41.87
No	304	58.13
Dental Abcess		
Yes	2	0.38
No	521	99.62
Diet impacted by the pandemic.		
Yes	130	24.86
No	393	75.14
Fear or anxiety during the pandemic		
Yes	119	22.75
No	404	77.25
Toothache during the pandemic		
Yes	79	15.11
No	444	84.89
Verbal or physical aggression experienced during or after the pandemic		
Yes	26	4.97
No	497	95.03
Use of dental services during the pandemic		
Yes	71	13.58
No	452	86.42
Sought dental care due to the child's need		
No	441	84.32
Yes, private service or health insurance e	54	10.33
Yes, public services	28	5.35

It is important to highlight that the indicator items with the greatest impact on this group were tooth or jaw pain and difficulties with eating and sleeping. Feelings of guilt and annoyance among parents regarding the child's situation were also present in 16.9%/ 18%, 13.70%, and 17.1% of the population, respectively (Table 3).

Table 3. Mean, standard deviation, and percentage of the B-ECOHIS by item and overall score (2022–2023) N = 523

Item	Mean	Standard Deviation	% of the population with the condition occasionally or more often
Pain in the teeth or jaws	1.53	0.92	16.90
Difficulty drinking liquids	1.30	0.72	5.50
Difficulty eating	1.54	0.97	18.00
Difficulty speaking	1.38	0.89	9.10
Difficulty attending school	1.32	0.76	8.50
Difficulty playing	1.23	0.68	4.80
Difficulty sleeping	1.43	0.86	13.70
Avoided smiling	1.25	0.68	4.30
Irritability due to dental problems	1.34	0.83	8.50
Dental problems caused a financial impact on the family	1.34	0.86	8.90

Item	Mean	Standard Deviation	% of the population with the condition occasionally or more often
The family felt upset	1.58	1.03	17.30
The family felt guilty	1.61	1.08	17.10
The family had to miss work	1.41	0.87	9.60
Global B-ECOHIS	1.51	0.62	*

Adopting a maximum p-value of 0.05, the impact of the use of dental services was statistically significant on the items in the child subscale: "Tooth or jaw pain" (p-value<0.00); "Irritation due to teeth" (p-value: 0.01) and "Dental problems caused financial loss to the family" (p-value: 0.02); and on the items in the family subscale: "Family member has felt guilty" (p-value: 0.021) and "Family member has had to miss work" (p-value: 0.03) (Table 4).

Table 4. Distribution of dental service utilisation according to OHRQoL by item (B-ECOHIS), 2022–2023 N = 523

	Use of dental services				
	NO (N=452)		Yes (N=71)		p-value
	Mean	SD	Mean	SD	
Pain in the teeth or jaws	1.46	0.87	1.99	1.11	**<0.00**
Difficulty drinking liquids	1.31	0.72	1.25	0.71	0.47
Difficulty eating	1.54	0.95	1.58	1.05	0.80
Difficulty speaking	1.38	0.88	1.38	0.94	0.97
Difficulty attending school	1.32	0.75	1.35	0.84	0.80
Difficulty playing	1.23	0.65	1.28	0.86	0.65
Difficulty sleeping	1.41	0.85	1.54	0.95	0.27
Avoided smiling	1.25	0.67	1.25	0.75	0.95
Irritability due to dental problems	1.29	0.77	1.65	1.07	**0.01**
Dental problems caused a financial impact on the family	1.30	0.82	1.62	1.05	**0.02**
The family felt upset	1.55	1.01	1.80	1.18	0.09
The family felt guilty	1.56	1.02	1.96	1.38	**0.02**
The family had to miss work	1.37	0.83	1.66	1.07	**0.03**

Table 5 presents, through bivariate analysis, the association between the global B-ECOHIS and sociodemographic variables, oral health status, and pandemic impacts. Adopting a maximum p-value of 0.05, the variables "age" (p-value: 0.05), "family income" (p-value: 0.02), "dental caries" (p-value: 0.00), and "fear or anxiety during the pandemic" (p-value: 0.002) showed statistical significance in this analysis.

Table 5. Global B-ECOHIS indicator associated with sociodemographic variables, oral conditions, and pandemic-related impacts among preschool children in Salvador-BA (2022–2023) N = 523

Characteristics	Mean	Standart deviation	p-value
Skin color			
Black/ Brown	1.52	0.62	
Others	1.49	0.58	0.76
Age (in months)			
Until 54 months	1.46	0.57	**0.05**
Up to 55 months	1.56	0.65	
Gender			
Female	1.49	0.61	0.33
Male	1.54	0.62	
Mother's education			
Until an incomplete high school	1.52	0.61	0.55
Up to complete high school	1.48	0.62	
Familiar income			
Until 01 minimum wage	1.55	0.65	**0.02**
01 minimum wage or more	1.42	0.51	
Dental caries			

Characteristics	Mean	Standart deviation	p-value
Yes	1.63	0.67	**<0.00**
No	1.43	0.56	
Diet impacted by the pandemic.			
Yes	1.58	0.66	0.19
No	1.49	0.60	
Fear or anxiety during the pandemic			
Yes	1.70	0.74	**<0.00**
No	1.46	0.56	
Verbal or physical aggression experienced during or after the pandemic			
Yes	1.77	0.72	0.07
No	1.50	0.61	
Use of dental services during the pandemic			
Yes	1.66	0.72	0.06
No	1.49	0.60	

In the results of the multiple linear regression analysis evaluating the association between dental service use and oral health-related quality of life, adjusted for family income, dental caries, and dental pain, no significant association was found (Table 6).

Table 6. Multiple linear regression analysis of the association between dental service utilisation and OHRQoL in preschool children

	Coef; 95%CI	T	p-value
Use of dental services*	- 0.28; -0.46-0.10	- 0.22	0.08

**Adjusted for lower family income, presence of dental caries, and parental report of dental pain.

3.2 Discussion

It was observed that dental pain and parental perception related to financial losses in the family, feelings of guilt, and absenteeism from work affected OHRQoL and were associated with the use of health services. Previous studies (Abanto et al., 2014; Fernandez et al., 2022; Oliviera et al., 2025; Queiroz et al., 2021; Cardoso et al., 2018) associated dental pain with the presence of caries, especially in more advanced stages of the disease, and with children's quality of life. In the present study, 41.87% of the children presented dental caries, a condition significantly associated with worse OHRQoL. Other studies (Damasceno et al., 2021; Andrade 2015) have also shown that children with a history of dental caries are more likely to have lower quality of life, as well as higher levels of pandemic-related anxiety and distress among their parents. These results support earlier research demonstrating that children's and their families' quality of life is adversely affected by dental pain, which is frequently linked to untreated dental caries. Despite this, the current study found no significant correlation between OHRQoL and dental care utilisation or access. The continuation of oral health issues and their detrimental effects may still be attributed to challenges in receiving timely and effective dental care. Therefore, lowering the burden of oral diseases and enhancing children's well-being continue to depend on providing access to preventive and curative oral healthcare. The study's conclusions should still be evaluated in light of the structural context of oral health services throughout the pandemic and post-pandemic periods, given the low usage of dental services in this Community (Choi et al., 2023; Santos et al., 2021). The reorganisation of dental care during the pandemic resulted in the interruption or significant reduction of preventive, educational, and longitudinal follow-up actions in primary care, with a prioritisation of urgent and emergency (Samuel et al., 2021; Campagnaro et al., 2020; Mendes et al., 2020). In Salvador-BA, it affected children under 6 years of age more than other age groups because they have historically had less regular access to dental services and have depended on family initiative to access care (Damasceno et al., 2023). In addition, the suspension of school and group activities that promote oral health and child care in primary care could affect that population (Campagnaro et al., 2020). Economic constraints, food insecurity, mobility challenges, and diminished family ability to seek preventive care may have exacerbated these limitations in socially vulnerable contexts. This has contributed to the expansion of oral health disparities and to a pattern of dental service utilisation primarily driven by pain and treatment needs rather than prevention (Correa-Faria et al., 2022; Diaz et al., 2018). Although not specifically evaluated in this study, these factors offer plausible explanations for the low utilisation of dental care and the lack of a significant correlation between service use and OHRQoL.

The implications for parents and guardians are significant, often leading to guilt, missed workdays, and financial difficulties. It has been noted that postponing dental care until pain arises intensifies the economic and emotional toll on families, as supported by previous findings (Mendes et al., 2020). In this context, the postponement of dental care during the pandemic may

have contributed to the worsening of oral conditions and greater family repercussions.

Three studies (Zaror et al., 2022; Leal et al., 2024; Fernandez et al., 2022) have confirmed a clear association between children's age and OHRQoL. Older children have more developed cognitive and emotional capacities, allowing them to clearly communicate their own discomfort, which influences parents' perception of this indicator.

Oral diseases in childhood are strongly influenced by living conditions, income, parental education, social inclusion, food security, housing conditions, and timely access to health services. The current investigation found no significant correlation between these characteristics and oral health-related quality of life. The population's relative socioeconomic homogeneity, which was primarily composed of low-income households, helps explain this finding. Even if these traits affect oral health outcomes, their limited variability may have reduced the statistical power to detect meaningful differences across groups. In preschoolers, these factors act in an interdependent manner on eating habits, hygiene practices, use of dental services, and exposure to vulnerable contexts, directly influencing the occurrence of problems such as dental caries and, consequently, oral health-related quality of life.

As identified in this study, children from socially vulnerable families tend to have a higher disease burden, greater pain experience, feeding difficulties, sleep disturbances, and more intense emotional and family impacts (Asiri et al., 2024; Diaz et al., 2018). These adverse conditions may also increase the likelihood of seeking dental care, suggesting reverse causality in the relationship between dental service utilisation and oral health-related quality of life. In this context, children with poorer oral health and greater impacts on daily life may be more likely to use dental services, making service utilisation a marker of existing treatment needs rather than a determinant of better quality of life. In this context, public policies play a central role in reducing inequities in oral health, especially by strengthening Primary Health Care, expanding coverage of Oral Health Teams, integrating health and education, and implementing preventive strategies for early childhood. However, structural inequalities persist in the supply and use of services, indicating that normative advances and the expansion of care coverage do not always translate into equitable access and comprehensive care (Diaz et al., 2018; Ribeiro et al., 2016).

Implication

The multivariate analysis showed that dental service utilisation was not significantly associated with oral health-related quality of life (OHRQoL) after adjustment for family income, dental caries, and dental pain. Despite the absence of statistical significance, these findings should not be interpreted as evidence that dental services are unimportant for children's oral health and well-being. Access to and use of dental services remain essential components of comprehensive oral healthcare, particularly for socially vulnerable populations and children with greater treatment needs. Moreover, the lack of association may reflect the study's cross-sectional design and the possibility of reverse causality, whereby children with poorer oral health and worse OHRQoL are more likely to seek dental care. In this context, dental service utilisation may act as a marker of existing oral health problems rather than a determinant of better quality of life, potentially attenuating the observed association.

Limitations

One aspect to consider in interpreting the results is the possibility of reverse causality, inherent to the study's cross-sectional design. Although a borderline association was observed between dental service use and worse OHRQoL, it is not possible to determine whether low service use contributed to worse oral health. It can also be hypothesised that children with a higher disease burden, dental pain, and impacts on quality of life were precisely those who sought dental care the most. In this context, the use of services may reflect demand stemming from pre-existing problems, especially in predominantly curative, late-access scenarios. This possibility limits causal inference and warrants caution when interpreting the findings, reinforcing the need for longitudinal studies to evaluate temporality, the trajectory of service use, and their effects on oral health and quality of life in early childhood. This study has limitations that should be considered when interpreting the findings. Because the sample was selected by convenience sampling from municipal public daycare centres, the results should be interpreted with caution when generalising to other child populations. Self-completion of the questionnaires by caregivers may have introduced information and memory biases, especially regarding variables related to the pandemic period, service use, and perceptions of children's quality of life. There is also the possibility of underestimation of some oral health problems and psychosocial impacts due to the gradual resumption of services and social activities in the post-pandemic period. Additionally, although multivariate analysis was performed, potential residual confounding factors and interrelationships among socioeconomic, clinical, and behavioural variables may have influenced the observed associations.

Research Contributions and Suggestions

Despite these limitations, the study presents epidemiological and social relevance by highlighting the persistence of inequalities in access to dental services and their impact on the oral health-related quality of life (OHRQoL) of preschool children in socially vulnerable contexts, contributing to the strengthening of public policies aimed at equity and comprehensive oral health care in early childhood. Future studies should adopt longitudinal designs to understand better causal pathways and temporal changes in service utilisation and OHRQoL, and to explore the effects of specific policy interventions, family-level determinants, and contextual social factors that may mitigate inequalities and improve access to preventive oral health care for

vulnerable populations. Furthermore, qualitative approaches, including in-depth interviews and focus groups with caregivers, health professionals, and policymakers, could provide valuable insights into the perceived barriers and facilitators to accessing oral health services. Such methods may help uncover social, cultural, organisational, and structural factors that are often not fully captured by quantitative analyses, thereby contributing to a more comprehensive understanding of healthcare utilisation and its relationship with oral health outcomes.

4. CONCLUSION

The low utilisation of dental services observed in this study may have contributed to the absence of a significant association between service use and oral health-related quality of life (OHRQoL). Moreover, the study was conducted in the post-pandemic period, and the lingering effects of COVID-19 may have influenced healthcare-seeking behaviours and access to dental care. It was associated with worse indicators of oral health-related quality of life (OHRQoL), particularly in the domains of dental pain and family impacts. OHRQoL was also associated with clinical, socioeconomic, and emotional factors, highlighting the influence of social inequalities on children's oral health. The findings suggest that access to services occurred predominantly in situations of greater clinical need, reinforcing the importance of public policies that expand preventive, timely, and equitable access to oral health in early childhood.

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Author Contributions

M.C.T.C. and T.F.A. were involved in the conceptualisation, methodology, and formal analysis; M.C.T.C. and T.F.A. participated in data collection. M.C.T.C., T.F.A., and K.L.C.H. developed the original draft of the manuscript, prepared the text for review and editing, and conducted the review and editing. All authors have read and agreed to the published version of the manuscript.

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AUTHOR INFORMATION

Corresponding Authors

Maria Cristina Teixeira Cangussu, School of Dentistry, Federal University of Bahia, Salvador, Bahia, Brazil
ORCID: https://orcid.org/0000-0001-9295-9486
Email: cangussu@ufba.br

Authors

Keila Lais Carrera da Hora, Department of Dentistry and Collective Health, School of Dentistry, Federal University of Bahia, Salvador, Bahia, Brazil
ORCID: https://orcid.org/0000-0002-6443-8138
Email: keila.carrera@hotmail.com

Tatiana Frederico de Almeida, Department of Dentistry and Collective Health, School of Dentistry, Federal University of Bahia, Salvador, Bahia, Brazil
ORCID: https://orcid.org/0000-0002-6118-6668
Email: tfa@ufba.br

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