Saúde e Pesquisa
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Association between oral health, social, cultural and access variables in individuals from a quilombola population

Associação entre saúde bucal, variáveis sociais, culturais e de acesso em indivíduos de uma população quilombola

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ABSTRACT
To evaluate oral health conditions and their relationship with sociocultural aspects and access to dental services in quilombolas in the municipality of Cachoeira – state of Bahia. A cross-sectional study with 128 individuals was carried out. Statistical analysis was conducted through the frequency distribution of demographic and socioeconomic variables. The association between variables and outcomes was estimated by Prevalence Ratio and respective confidence intervals. There was statistical significance (95% CI) between periodontal disease and cariogenic diet, medicinal plants, and rinsing with tea or mouthwash, as well as an association between dental caries and difficulty in accessing dental services, toothache, and edentulism. The highest prevalence of oral diseases investigated was found in adult individuals and predominantly in women, and most individuals had only elementary education and income below one minimum wage

Keywords: Epidemiology. Oral Health. Public Health. Ethnicity.

RESUMO
Avaliar as condições de saúde bucal e sua relação com os aspectos socioculturais e de acesso a serviços odontológicos em quilombolas do Município de Cachoeira – Bahia. Realizou-se um estudo transversal, examinando 128 indiíduos. A análise estatística foi conduzida através da distribuição das frequências das variáveis demográficas e socioeconômicas. O cálculo de associação entre as variáveis e os desfechos foi obtido pelas Razões de Prevalências e respectivos intervalos de confiança. Constatou-se que há significância estatística (IC 95%) entre a doença periodontal e dieta cariogênica, plantas medicinais e bochecho com chá ou enxaguante bucal, assim como existiu associação entre a cárie dentária e a dificuldade de acesso a serviços odontológicos, odontalgia e o edentulismo. A maior prevalência dos agravos bucais investigados foi em indivíduos adultos e predominantemente em mulheres, sendo que a maior parte dos indivíduos possuía apenas o ensino fundamental e renda inferior a um salário-mínimo.

Palavras-chave: Epidemiologia. Saúde Bucal. Saúde Pública. Etnia.

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INTRODUCTION

The human being, as a subject of rights, must and deserves to be treated equally among their peers, however, it is known that human rights are not universal. Social status can exclude and often kill most people as a result of a lack of access to basic health services or exposure to violence[1,2].

In the context of public health, some conditions directly influence disease care, such as restrictions and/or access opportunities, and such conditions generate an economic-social stratification of individuals and population groups, giving them different social positions[3,4] and generate social inequalities, which, added to the process of social exclusion, have deleterious effects on general and oral health[5].

Even in developed countries, the availability of dental services is uneven and varies according to people's social, political, and economic factors[6,7]. In the Brazilian context, studies point out that there are greater obstacles to general[8] and oral health care for black individuals (black and brown) than for whites, noting that in relation to access, for black people it is mostly through the public service[4,5,9,10,11].

For example, in the rural and quilombola community of Bomjardim da Prata, northern Minas Gerais, the lack of treated water, sanitation, lack of medical and dental care, and the severity of the oral situation of this community found in a survey of needs, point out that this population is excluded from the access to health advocated by the Brazilian Federal Constitution[6].

Thus, considering the health of the black population in our country, Gibran[7] also points out the worst levels of education, low wages, and low life expectancy, reflecting on oral health conditions, and the state of the teeth represents one of the most significant signs of social exclusion, whether due to oral problems or difficulties in accessing care services. Oral health problems are socially determined; their severity is conditioned by the vulnerability of each population.

The Brazilian government policy for Oral Health points out that access to basic care must be expanded and qualified, guaranteeing dental services in all basic health units, including rural and difficult-to-access areas (such as quilombola communities), however, this segment population was and still is excluded from the current process of development[8].

In this sense, the National Oral Health Survey (Projeto SB Brasil 2010)[9] states that over the past seven years, the adult population has had greater access to dental services, signaling a very important reversal of the trend registered in the country. However, there is still less access to dental services in the Northeastern region. Carvalho et al.[10] confirmed that oral diseases have prevailed in rural populations and with a more severe form, presenting important levels of edentulism. Likewise, Macedo et al.[11], reaffirm in a study carried out with a rural population in the interior of the Northeast, that 50% studied population had more than 4 missing teeth.

Specifically for Brazilian quilombola communities, there is a lack of studies focusing on ethnic and vulnerable groups, necessary for the development of effective programs to deal with specific oral health problems. It is important to consider that the history of social injustice and neglect of the Afro-descendant population has produced social and economic conditions that directly affect the health of these people[7].

Despite the advances of the Brazilian Unified Health System (SUS), the issue of access to health by quilombola communities is a social issue that requires debate, especially when reflecting on exclusion, iniquity, inequality, culture, and ethnic identity[12]. In this context, this the present study aimed to evaluate the conditions of oral health and its relationship with sociocultural aspects and access to dental services in men and women from quilombola communities in the municipality of Cachoeira, state of Bahia

METHODOLOGY

This research was submitted for evaluation and approval by the Human Research Ethics Committee of the State University of Feira de Santana (052448/2012). The individuals were invited to participate in the research and the exams were performed after signing the informed consent.

This was a cross-sectional study whose data were obtained from an observational epidemiological study that aimed to "evaluate oral health conditions and their relationship with bio-sociocultural aspects in men and women in the age groups of interest (20 to 59 years old and ≥ 60 years old) from quilombola communities in the municipality of Cachoeira, state of Bahia".

This is a municipality in the Recôncavo Baiano, which has 32,026 inhabitants, having as a field of study, properly speaking, the district of Santiago do Iguape, which is 40 km far from downtown and has a population of approximately 5,000 inhabitants and has 08 quilombola communities recognized by the Palmares Cultural Foundation (FCP) since June 2004, made up of 297 families and 1,233 people (including children, adolescents, adults and the elderly).

This study included a population of 08 quilombola communities, comprising 300 individuals (eligible to participate in the study, according to the age criterion), that is, all men and women, following the age groups available in the Primary Care Information System (SIAB), who are 20 to 59 years old and ≥ 60 years old. Thus, 276 adults and 24 elderly people were counted in these age groups, however, during data collection, there was a need for the study to be converted to a sample of 128 individuals, due to the difficulty of access, such as geographic limitations, people absent due to the time of data collection (household chores and others) and refusal to the clinical examination.

Data relating to the 128 individuals were collected by 10 volunteer academics from the Dentistry Program at the State University of Feira de Santana, scholarship holders of the Tutorial Education Program (PET/UEFS). These were previously calibrated following the value used in the SB Brasil 2010 Project, that is, a minimum agreement limit of 0.65 for the Kappa. Thus, examinations were carried out in a place with natural light to evaluate the experience of caries, periodontal disease, oral lesions, and edentulism. For the oral examination, a wooden spatula, clinical mirror number 05, clinical tweezers, and an exploratory probe were used. Demographic, socioeconomic, and access data to dental services were obtained from the application of a form (developed by the research team) by one of the researchers. Individuals who did not attend the place at the time of data collection had another opportunity to meet, on another day and time, previously scheduled.

Dependent variables selected in this study were: dental caries, periodontal disease, oral lesion, and edentulism. The independent variables were divided into three dimensions: demographic and socioeconomic condition (gender, age group, income, marital status, level of education, family composition, race/color, number of children, number of people living in the house); knowledge and practices regarding oral health (cariogenic diet, smoking, alcoholism, number of daily brushings, oral hygiene instructions, use of medicinal plants, use of dental floss, mouthwash); and access to dental services (use of medication, current illnesses, difficulties in accessing public services, pain in any part of the mouth, dental pain, periodontal treatment, dental surgery, gum bleeding).

The information obtained was analyzed using the SPSS Statistics 17.0 software. The analysis of demographic and socioeconomic data was carried out descriptively through the distribution of frequencies, to calculate the prevalence of oral health problems according to gender and age group. The association between the variables related to knowledge and practices

in oral health and access to dental services about caries, periodontal disease, oral lesions, and edentulism was estimated by Prevalence Ratio (PR) and respective confidence intervals (95% CI), to test the degree of the association between the outcome and the variables

RESULTS

Table 1 lists the characteristics related to demographic and socioeconomic factors. Of the individuals examined, 84.4% were adults (20 to 59 years of age) and 15.6% were elderly (60 years or older). Thus, there was a greater participation of women in this study (66.4%). As for marital status, 64.8% were married, 28.1% were single and/or divorced and 7% were widowed. Skin color was black for 94.5%, and 5.5% were brown.

Table 1. Description of the sample (n = 128) according to demographic and socioeconomic variables. Cachoeira, state of Bahia, Brazil.

(Continua)

Variables/N = 128	Frequency	%
Gender		
Female	85	66.4
Male	43	33.6
Age		
20 to 59 years	108	84.4
> 60 years	20	15.6
Schooling		
Elementary education	99	77.3
High school	26	20.3
Higher education	3	2.3
Income		
<01 wage	33	25.8
01 to 03 minimum wages	31	24.2
Bolsa Família	64	50
Race/color		
Black	121	94.5
Brown	7	5.5

(Conclusão)

Marital status		
Married	83	64.8
Single/divorced	36	28.1
Widowed	9	7
Number of children		
0 to 05	102	79.7
06 to 10	19	14.8
> 10	7	5.5
Number of people living in the same house		
01 to 05	98	76.6
06 to 10	29	22.7
> 10	1	8
Occupation		
Farmer	79	61.7
Others	49	38.3

Our findings showed that 25.8% individuals had a monthly income of less than one minimum wage, and only 24.2% declared up to 03 monthly minimum wages. With regard to occupation, 61.7% declared themselves to be farmers, and 38.3% reported other professions (seafood collector, fisherman, teacher, bricklayer, student, etc.). As for schooling, 77.3% had a low level of education, up to elementary school; 20.3% said they had studied up to high school and only 2.3% reported higher education.

Regarding the investigated oral conditions (caries, periodontal disease, oral lesions, and edentulism), tables 2 and 3 list the prevalence of these diseases stratified by gender and age group. In this regard, dental caries is present in a proportion of 65.4% in females versus 34.6% in males. As for the prevalence of periodontal disease, there was a greater predominance in women, with 65.6%, compared to men, with 34.4%.

Table 2. Prevalence, Prevalence ratio (PR), and 95% confidence interval (95%CI) of oral health problems by sex and age. Cachoeira, state of Bahia, Brazil.

Exposure factors	Caries				Periodontal Disease			
	N	P	PR	CI	N	P	PR	CI
Gender								
Female	68	0.61	1.22	0.55-2.73	59	0.75	1.09	0.61-1.95
Male	36				31			
Age								
20 to 59 years	90	0.16	0.55	0.25-1.22	77	0.57	0.82	0.42-1.59
>60 years	14				13			

Table 3. Prevalence, Prevalence ratio (PR) and 95% confidence interval (95%CI) of oral health problems by sex and age. Cachoeira, state of Bahia, Brazil.

Exposure factors	Oral lesion				Edentulism			
	N	P	PR	CI	N	P	PR	CI
Gender								
Female	7	0.45	0.96	0.87-1.05	55	0.78	0.98	0.86-1.11
Male	2				28			
Age								
20 to 59 years	7	0.57	1.03	0.89-1.21	66	0.61	1.03	0.87-1.22
>60 years	2				17			

To assess the edentulism condition, the number of women in need of some type of prosthesis was 66.3%, and the number of men was 33.7%. Thus, oral disorders considering the independent variables (gender and age) showed no statistical significance (95% CI), i.e., in this study, these variables do not mean risk for the development of the aforementioned outcome.

Tables 4 and 5 list the association between caries, periodontal disease, oral lesions, and edentulism/need for a prosthesis and the variables related to knowledge and practices in oral health care. Thus, comparing the outcomes (caries, oral lesion, and edentulism) and the variables related to knowledge and practices in oral health care, no statistical significance was detected (95% CI).

Table 4. Prevalence ratio (PR) and 95% confidence interval (95% CI) for the analysis of variables related to knowledge and practices associated with conditions in Oral Health. Cachoeira, state of Bahia, Brazil.

(Continua)

Exposure factors	Caries			Periodontal Disease		
	N	PR	CI	N	PR	CI
Cariogenic Diet						
No	27	2.04	0.98-4.06	22	1.72	1.02-2.89
Yes	77			68		
Smoking						

(Conclusão)

Exposure factors	Caries			Periodontal Disease		
	N	PR	CI	N	PR	CI
No	95	0.46	0.20-1.05	80	1.04	0.43-2.50
Yes	9			10		
Usage/alcoholic beverage						
No	57	0.85	0.41-1.75	47	1.17	0.68-2.02
Yes	47			43		
Tooth brushing >3X day						
No	57	0.85	0.41-1.75	49	0.95	0.55-1.62
Yes	47			41		
Guidance on prevention						
No	43	1.51	0.73-3.13	38	1.15	0.67-1.97
Yes	61			52		
Medicinal plants						
No	48	2	0.92-4.34	37	2.45	1.33-4.51
Yes	56			53		
Use of Dental Floss						
No	78	1.21	0.49-2.98	69	0.89	0.42-1.62
Yes	26			21		
Mouthwashing						
No	65	1.99	0.79-4.97	53	2.32	1.11-4.83
Yes	39			37		

Table 5. Prevalence ratio (PR) and 95% confidence interval (95% CI) for the analysis of variables related to knowledge and practices associated with conditions in Oral Health. Cachoeira, state of Bahia, Brazil.

(Continua)

Exposure factors	Oral lesion			Edentulism		
	N	PR	CI	N	PR	CI
Cariogenic Diet						
No	4	0.94	0.84-1.06	28	0.92	0.79-1.06
Yes	5			55		
Smoking						
No	8	1	0.85-1.16	72	1.1	0.87-1.40
Yes	1			11		
Usage/alcoholic beverage						
No	5	0.99	0.90-1.09	49	0.96	0.85-1.07
Yes	4			34		
Tooth brushing >3X day						

(Conclusão)

Exposure factors	Oral lesion			Edentulism		
	N	PR	CI	N	PR	CI
No	7	0.93	0.84-1.02	49	0.96	0.85-1.07
Yes	2			34		
Guidance on prevention						
No	6	0.93	0.84-1.03	36	1.00	0.88-1.13
Yes	3			47		
Medicinal plants						
No	8	0.88	0.80-0.98	34	0.99	0.87-1.12
Yes	1			49		
Use of Dental Floss						
No	8	0.94	0.86-1.03	63	0.95	0.85-1.08
Yes	1			20		
Mouthwashing						
No	7	0.96	0.87-1.05	49	0.96	0.85-1.07
Yes	2			34		

In the comparison between periodontal disease and frequent consumption of cariogenic foods, the statistical significance (95% CI) was 1.72[1.02-2.89]. With regard to periodontal disease and the habit of using medicinal plants, there was statistical significance (95% CI) 2.45[1.33-4.51]. Comparing periodontal disease to the habit of rinsing with tea or mouthwash, the statistical significance (95% CI) was 2.32[1.11-4.83] and the prevalence was 41.1% of individuals affected by the disease and who have the habit of rinsing with tea or mouthwash.

Tables 6 and 7 refer to the association between the outcomes and the variables of access to dental services (regular visits to the dentist, presence of some type of disease, use of continuous medication, difficulty in accessing the SUS dental service, pain in the soft tissue of the oral cavity, pain in some tooth, periodontal therapy, some type of oral surgery, and occurrence of gingival bleeding.

Table 6. Prevalence ratio (PR) and 95% confidence interval (95% CI) in the analysis of oral health attention associated with oral health problems. Cachoeira, state of Bahia, Brazil.

(Continua)

Exposure factors	Caries			Periodontal disease		
	N	PR	CI	N	PR	CI
Regular visits to the Dentist						
No	83	0.68	0.31-1.47	70	1.05	0.54-2.02
Yes	21			20		
Pathologies						

Exposure factors	Caries			Periodontal disease		
	N	PR	CI	N	PR	CI
No	81	0.42	0.21-0.86	68	0.78	0.47-1.37
Yes	23			22		
medication use						
No	81	0.48	0.24-0.98	67	0.97	0.53-1.77
Yes	23			23		
Difficulty/access/public						
No	33	0.03	1.16-1.14	21	1.66	0.98-2.81
Yes	71			69		
Pain in soft tissues						
No	93	0.86	0.29-2.51	81	0.81	0.37-1.73
Yes	11			9		
Toothache						
No	41	2.49	1.14-5.40	35	1.71	0.99-2.94
Yes	63			55		
Periodontal treatment						
No	83	0.58	0.27-1.22	68	1.29	0.63-2.63
Yes	21			22		
Dental Surgery						
No	98	0		0 85	1.82	0.29-11.1
Yes	6			5		
Gingival bleeding						
No	63	1.45	0.65-3.25	54	1.3	0.72-2.32
Yes	41			36		

Table 7. Prevalence ratio (PR) and 95% confidence interval (95% CI) in the analysis of oral health attention associated with oral health problems. Cachoeira, state of Bahia, Brazil.

(Continua)

Exposure factors	Oral lesion			Edentulism		
	N	PR	CI	N	PR	CI
Regular visits to the Dentist						
No	7	1	0.89-1.12	63	1.08	0.93-1.28
Yes	2			20		
Pathologies						
No	R$ 6.00	R$ 1.02	0.912-1.15	57	1.15	0.98-1.35
Yes	R$ 3.00			26		
medication use						
No	6	1.03	0.91-1.16	58	1.1	0.94-1.29
Yes	3			25		

(Conclusão)

Exposure factors	Oral lesion			Edentulism		
	N	PR	CI	N	PR	CI
Difficulty/access/public						
No	1	1.06	0.04-1.15	24	1.00	0.87-1.14
Yes	8			59		
Pain in soft tissues						
No	6	1.2	0.91-1.59	72	0.91	0.85-0.96
Yes	3			11		
Toothache						
No	8	0.87	0.78-0.97	33	0.94	1.83-1.07
Yes	1			50		
Periodontal treatment						
No	7	0.99	0.89-1.11	62	1.01	0.87-1.17
Yes	2			21		
Dental Surgery						
No	9	0.92	0.88-0.97	77	0.91	0.85-0.97
Yes	0			6		
Gingival bleeding						
No	5	1.02	0.75-1.13	56	0.93	0.84-1.04
Yes	4			27		

Regarding dental caries, statistical significance (95% CI) was detected when related to difficulty in accessing the SUS dental service 0.03[1.16-1.14]. When analyzing the presence of dental caries associated with the painful process in some dental unit, a statistical significance (95% CI) of 2.49[1.14, 5.40] was found.

When testing the relationship between edentulism (need for a prosthesis) and the presence of a painful process in any dental unit, a statistical significance (95% CI) of 0.94 was found [1.07-1.83].

DISCUSSION

This study had a greater predominance of women (66.4%) than 33.6% men, the proportion was similar to the study developed by Barbato *et al.*[13], corresponding to 67.8% women and 32.2% men, who have this imbalance between genders, justified by the probable time at which data were collected (business hours), thus, this distortion in our sample is not justified, as we use meetings on weekends. A study carried out by Miranda *et al.*[14] analyzed oral health and access to dental services in an elderly quilombola community in Central-West Brazil, which also found a prevalence of female individuals (59.9%).

Importantly, oral health is not dissociated from the general health of the individual, therefore, knowing and evaluating the oral health status of adults and elderly people from traditional communities is important to provide information to support public policies to efficiently meet these demands [15,16].

Concerning socioeconomic conditions, the National Commission on Social Determinants in Health (CNDS) points out that differences in education are remarkable according to skin

color, thus, in this study, 94.5% participants are black. The population of the Recôncavo Baiano region is predominantly of African descent and has a large concentration of *terreiros* and quilombola communities. This same condition found that the effects of the level of education are manifested in the most different ways: in the perception of health problems; in the ability to understand health information; in the adoption of healthy lifestyles; in the consumption and use of health services; and adherence to therapeutic procedures[2].

We agree with Barbato *et al*.[13], when they state that the location in the rural environment conditions lower levels of education and income compared to the urban environment, which is evident in the quilombola communities evaluated in this study, in which 77.3% have a low level of education, up to elementary school, 25% live on less than one minimum wage and 50% live on the Bolsa Família Program, which is an Income Transfer Program and constitutes the main policy for combating poverty in Brazil. The purpose of the program is to eradicate poverty, that is, reduce social inequality and combat Hunger. According to Ferreira[16], the members of the quilombola communities of Santiago do Iguape, when living in places with difficult access to material and symbolic resources, see their conditions of poverty being produced and reproduced, in a perverse circle that shapes the lack of better opportunities, confining them to a place far from minimally acceptable standards. This same author reported that in these communities all women today do things that they did not do when they were not beneficiaries of the Bolsa Família Program, a portion (32.43%) of the interviewees stated that they buy in installments; it is known that before these women did not have credit in the market, that is, they did not buy because they could not pay.

A higher occurrence of dental caries was found in women (65%) and adults (86.5%). Corroborating our results, other studies also concluded that women were at greater risk of experiencing caries[19-21].

Still on this oral condition, Soares, Freire and Araújo[34] demonstrated that in a quilombola population composed of 298 individuals aged between 01 and 78 years in the state of Goiás, only 25.5% of the population was free of caries, and about 45 % of the population over 14 years old had some tooth loss, reaffirming the difficulty in accessing health services.

Thus, a national study called SB Project (Oral Health) Brazil 2010, states that Brazil moved from a condition of medium prevalence of caries in 2003 (CPO between 2.7 and 4.4) to a condition of low prevalence in 2010 (CPO between 1.2 and 2.6)[9].

In the present study, periodontal disease in women showed a prevalence of 65.6%, whereas, in the group of adults, it was 85.6%, and of the elderly 14.4%. In line with these findings, Macedo *et al*.[12], in a rural area in the state of Bahia, observed that gingivitis was found in 97.7% population, and periodontitis in 24.4% of the population. The international literature also shows a higher prevalence of periodontal disease in African descendants and its association with socioeconomic status[22, 23,24,25].

The results of SB Project (Oral Health) Brazil 2010 indicate that the most severe forms of periodontal disease appear more significantly in adults (35 to 44 years old), with a prevalence of 19.4% observed. In the elderly, gingival problems have little expression in population terms, due to the reduced number of teeth present[9].

Women represented the majority in relation to oral lesions, the percentage was 77.8%. A similar study on the prevalence of changes in the oral mucosa in Brazilian adults was carried out in a population over twenty years of age, of both sexes, and the sample was represented by 64.8% women, corresponding to a proportion of 1.8 women for every man[22]. Other Brazilian studies are also similar to these results[23,24] and unlike a study carried out in the United States[25],

which showed that men represented the majority of the sample.

As for edentulism and the need for a prosthesis, 66.3% of women need some type of prosthesis, and in adulthood, there is a record of a large number of women in need (79.5%). The elderly had a percentage of 20.5. Similar findings were verified by Guiotoku[26], considering that the oral health profile of the population of black adults and elderly Brazilians presents an alarming prevalence of tooth loss and the need for prosthetic rehabilitation. Also, Scott[27] in the central region of the state of Rio Grande do Sul, in the municipalities of Santa Maria, Formigueiro, and Restinga Seca, conducted a survey with 51 individuals over 18 years of age, and revealed that the prevalence of need for some type of dental prosthesis was 88.2%, and the use of some type of dental prosthesis equal to 33.3%, with women (62.2%) showing a higher prevalence of need for dental prosthesis than men, and individuals aged 60 years and over had a lower (23.5%) prevalence of prosthesis use than the others.

A recent study indicates a high prevalence of missing teeth in the adult and elderly population, with DMFT index (decayed, missing, and filled teeth) varying between 15.4 and 24.7 in quilombolas in the Northeast region of Brazil[17]. A study carried out in Florida, USA[30] showed that individuals with low socioeconomic status were more likely to have their teeth extracted, thus race and socioeconomic status were strongly associated with tooth loss.

It is important to highlight that, according to the SB Project (Oral Health) Brazil 2010, the estimated need for dental prostheses for adults occurs in 68.8% cases, and in elderly people aged 65 to 74 years, 23.9% need complete dentures in at least one maxilla, and 15.4% need a complete double denture, that is, in both maxillas[9].

In this study, statistical significance (95% CI) was found between periodontal disease and the frequent consumption of cariogenic foods, the habit of using medicinal plants to treat oral conditions, and the habit of rinsing with tea or mouthwash. It is currently understood that periodontal disease has a multifactorial etiology, and the causal factors are closely related to the risk indicators. Several potential risk indicators for periodontal disease have been analyzed and confirmed by epidemiological surveys, thus, the socioeconomic factor has currently been considered of fundamental importance in the determination of diseases[29], thus, the National Commission on Social Determinants in Health emphasizes that the food consumption pattern is strongly influenced by income and schooling, and, in Brazil as a whole, the lower the income and schooling, the greater the predominance of a diet with excess sugar and insufficient fruit and vegetables[2].

As for the use of medicinal plants, a diversity of species was mentioned, with the predominant use of mouthwash with tea, and plants found in the community. It should be noted that quilombola communities hold traditional knowledge and practices in oral health, such as the use of medicinal plants for therapeutic purposes in dentistry, which can be investigated pharmacologically. A similar study carried out by Oliveira and Collier[30] investigated in the Kalunga quilombola community of Quilombo do Engenho de Dentro in Cavalcante, state of Goiás, medicinal plants used for the treatment of oral diseases and as a local anesthetics, citing 38 species used for toothache, canker sores, ulcerations, infections, thrush, inflammation, and edema, with the interviewees stating that the treatment is always effective.

Still regarding the use of these plants, according to Juiz *et al.*[33], the new treatment strategies, with the use of these plants in the control of growth and organization of the subgingival biofilm will bring a new possibility for the treatment of periodontal disease. Among the expected actions, an immunomodulatory, anti-inflammatory, and antimicrobial effect is a useful tool in the treatment of periodontal tissue

diseases. In this way, methods for the treatment of periodontal disease that are effective and accessible to the population could change the current situation in which the oral health of Brazilians is found in the international scenario.

Access to dental services for the Brazilian adult population has always focused on the treatment of dental emergencies. Pain is, most of the time, the reason that leads adults to seek a dentist and the outcome is tooth loss[13], this study also identified statistical significance (95% CI) between dental caries and difficulty accessing dental services at SUS, as well as the presence of a painful process in a dental unit, reaffirming that the population's experience reinforces the challenge of adequate access to oral health services in the region.

For Flores and Drehmer[35], the feeling of pain and the decision to treat or not are conditioned by life experience, cultural factors, and expectations of the resolution, since, for those who gain access to the public system, they find a model of care with little emphasis on preventive practices, in which dental restorations are performed with poor technique, causing less durability and consequently the extraction of the unit.

About edentulism, there was statistical significance (95% CI) when related to the presence of a painful process in any dental unit. According to Lacerda and Simionato[36], caries and periodontal disease are the main reasons leading to tooth loss and this occurs due to treatment in advanced stages, a situation often observed in countries where the population has restricted access to actions to promote health and dental services. In the same way, access to dental services for the Brazilian adult population has always focused on the treatment of dental emergencies. Thus, the systematic exclusion of specialized services and the restricted supply of primary care (access to dental services) result in tooth extraction[13,36].

A review study that summarized the main findings of the Brazilian literature on oral health problems in quilombola communities highlighted a high prevalence of dental caries, edentulism, and periodontal disease in quilombola communities in Brazil, which are the most commonly addressed problems. The burden of social vulnerability that falls on these communities ends up preventing the quilombolas from keeping up with the improvements in oral health registered for the general population. Therefore, the need to reformulate public policies for the Brazilian quilombola population is evident, to reduce social inequalities[37]

CONCLUSION

According to our results, it can be concluded that the highest prevalence of oral diseases investigated was in adults and predominantly in women, and most individuals had only elementary education and income below one minimum wage.

An association was found between periodontal disease and the cariogenic diet, the use of medicinal plants, and the habit of rinsing with tea or mouthwash. As well as, there was a relationship between dental caries, toothache, edentulism, and the difficulty to access the dental service of the Unified Health System.

In this regard, the great need for planning health actions aimed at reorganizing assistance and the development of local public policies with a greater focus on promoting the oral health of this population is highlighted

REFERENCES

1. Brasil. Decreto no. 4887, de 20 de novembro de 2003. Regulamenta o procedimento para identificação, reconhecimento, delimitação, demarcação e titulação das terras ocupadas por remanescentes das comunidades dos quilombos de que trata o art. 68 do Ato das Disposições Constitucionais Transitórias.

Brasília, DF. 2020. Disponível em: http://www.planalto.gov.br/ccivil_03/decreto/2003/D4887.htm

2. Teodoro MCSL, Santos DPA. Covid-19 e a população negra. Revista Ciranda, v. 05, n.03, p. 249-256, 2021.

3. Oliveira F. Saúde da população negra: Brasil ano 2001. Brasília: Organização Pan-Americana da Saúde, 2003. Acesso em: 08 de junho de 2013. Disponível em: http://www.opas.org.br.

4. Comissão Nacional sobre Determinantes Sociais da Saúde. Iniquidades em saúde no Brasil: nossa mais grave doença. Rio de Janeiro: CNDSS; 2008. Acesso em: 11 de junho de 2013. Disponível em: *h*ttp://bvsms.saude.gov.br/bvs/publicacoes.

5. Organização Pan-Americana de Saúde. Saúde nas Américas 2012. Acesso em: 11 de junho de 2013. Disponível em: http://www.opas.org.br.

6. Fonseca FA, Jones KM, Mendes DC, Santos PE, Ferreira RC, Pordeus IA, et al. A saúde bucal do idoso no Brasil: abordando as consequências de uma falta histórica da odontologia em saúde pública em uma sociedade desigual. Odontogeriatria. 2015;32(1):18-27. http://dx.doi.org/10.1111/ger.12046. PMid: 23489280.

7. Masood M, Newton T, Bakri N, Khalid T, Masood Y. A relação entre saúde bucal e qualidade de vida relacionada à saúde bucal entre idosos no Reino Unido. J Dent. 2017;56:78-83. http://dx.doi.org/10.1016/j.jdent.2016.11.002. PMid: 27825838.

8. Yabeta D, Gomes F. Memória, Cidadania e Direitos de comunidades remanescentes (em torno de um documento da história dos quilombolas da Marambaia). Afro-Ásia, v.47, n. 01, p. 79-117, 2013.

9. Carmo TNBV, Araujo EM, Araujo RLMS, Pereira SRS, Silva HP, Souza BLM. Fatores associados a doenças crônicas não transmissíveis autorrelatadas em quilombolas do semiárido baiano. Revista Baiana de Saúde Pública

10. Paixão M, Rosetto I, Montovanele F, Carvano LM. Relatório Anual das Desigualdades Raciais no Brasil; 2009-2010. Constituição Cidadã, seguridade social e seus efeitos sobre as assimetrias de cor ou raça. Disponível em: <http://www.irdeb.ba.gov.br/evolucaohiphop>. Acesso em: 01 de Novembro de 2011.

11. Guiotoku SK. Iniquidades em saúde bucal entre pretos, pardos e brancos: estudo comparativo. Caderno de Saúde Pública, 2009b. Disponível em: <http://www.biblioteca.pucpr.br/tede/tde/busca/processa>. Acesso em 10 out. 2011.

12. Macedo TCN, Costa M.C. N, Gomes-Filho IS et al. Factors related to periodontal disease in a rural population. Brazilian. Oral Research [online], 2006; 20 (3): 257-262.

13. Barbato PR, Nagano HCM, Zanchet FN, Boing AF, Peres MA. Perdas dentárias e fatores sociais, demográficos e de serviços associados em adultos brasileiros: uma análise dos dados do Estudo epidemiológico Nacional (Projeto SB Brasil 2002-2003). Cad. Saúde Pública, 2007 ago; 23(8): 1803-1814.

14. Miranda LP, Oliveira TL, Queiroz PSF, Oliveira PSD, Fagundes LS, Rodrigues-Neto JF. Saúde bucal e acesso aos serviços odontológicos em idosos quilombolas: um estudo de base populacional. Rev. Bras. Geriatr. Gerontol. 2020;23(2):e200146.

15. Batista MJ, Silva DD, Sousa MLR. Saúde bucal em uma população de adultos no município de Paulínia. Rev Odontol. UNESP 2010 jul-ago; 39(4): 185-191.

16. Sandes LFF, Freitas DA, Souza MFNS. Oral health of elderly people living in a rural community of slave descendants in Brazil. Cad. Saúde Colet., 2018, Rio de Janeiro, 26 (4): 425-431

17. Rosa JAA, Fernandez MS, Oliveira CCC. Análise clínica e salivar das condições de

saúde bucal de uma comunidade quilombola do Nordeste brasileiro. Interfaces Científicas • Aracaju • V.8 • N.2 • p. 375 - 388 • 2020 • Fluxo Contínuo.

18. Ferreira VS. O Impacto do Programa Bolsa Família na Vida das Mulheres de Santiago do Iguape – Comunidade Quilombola da Cidade de Cachoeira - BA. Trabalho de Conclusão de Curso apresentado ao Colegiado do Curso de Serviço Social da Universidade Federal do Recôncavo da Bahia, como requisito para obtenção do Grau de Bacharel em Serviço Social, 86 f. Cachoeira, BA, 2012

19. Namal N, Can G, Vehid S, Koksal S, Kaypmaz A. Dental health status and risk factors for dental caries in adults in Istanbul, Turkey. East Mediterr Health J. 2008; 14: 110-8

20. Doughan B, Kassak K. Oral health status and treatment needs of 35-44-year old adults in Lebanon. Int Dent J. 2000; 50: 395-9

21. Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Projeto SB Brasil 2010: condições de saúde bucal da população brasileira 2002-2003: resultados principais. Brasília: Ministério da Saúde; 2011. 68 p. Série C. Projetos, Programas e Relatórios.

22. Abbeg C. Oral hygiene habits among Brazilian adults in an urban area of Southern Brazil. Rev Saúde Pública. 1997; 31: 586-93.

23. Baelun V, Fejerskov O, Karring T. Oral Hygiene, gingivitis and periodontal breakdown in adult Tanzanians. J Periodontol Res 1986; 21(3): 221-32

24. Borrell LN, Taylor GW, Borgnakke WS, Nyquist LV, Woolfolk MW, Allen DJ, Lang WP. Factors influencing the effect of race on established periodontitis prevalence. J Public Health Dent 2003; 63(1): 20-9.

25. Henrique PR, Bagaza Junior M, Araujo VC, Junqueira JLC, Furuse C. Prevalência de alterações da mucosa bucal em indivíduos adultos da população de Uberaba, Minas Gerais. RGO, 2009 set; 57(3): 261-267

26. Knies G, Stramandinoli RT, Ávila LFC, Izidoro ACAS. Frequência das lesões bucais diagnosticadas no Centro de Especialidades Odontológicas de Tubarão (SC). RSBO 2011; 8(1)13-18.

27. Pereira TTM, Gaetti-Jardim EC, Castillo KA, Paes GB, Barros RMG. Levantamento Epidemiológico das Doenças de oca: Casuística de Dez Anos. Arch Healt Invest.2013 2 (3)

28. Shulman JD; Beach MM; Rivera H F. The prevalence of oral mucosal lesions em U. S. adults: data from the third National Health and Nutrition Examination Survey, J Am Dent Assoc. 1988-1994 sep: 35(9): 1279-86.

29. Sccott CA, Braun KO, Silva CA et al. Uso e necessidade de prótese dentária em indivíduos quilombolas da região central do Rio Grande do Sul, 2010. Acesso em: 12 de dez. de 2011. Disponível em: http://www.portal.ufsm.br.

30. Gilbert GH; Ducan RP; Shelton BJ. Social determinants of tooth loss. Health Serv Res, 2003;38(6)1843-62

31. Segundo TK, Ferreira EF, Costa JE. Doença periodontal em comunidade negra. Cad. Saúde Pública, 2004 mar-abr; 20(2): 596-603.

32. Oliveira EOS; Collier K, Mota GMF, Ely BP. Plantas medicinais usadas pela comunidade Kalunga do quilombo do Engenho de Dentro em Cavalcante–GO. Rev. Cereus, 2011. jun; (4).

33. Juiz PJL, Alves RJC, Barros TF. Uso de produtos naturais como coadjuvante no tratamento da doença periodontal. Revista Brasileira de Farmacognosia Brazilian Journal of Pharmacognosy 2010 mar; 20(1): 134-139.

34. Soares ÉF, Freire MCM, Araújo AC. Kalunga - GO: primeiro relato sobre experiência de cárie e comportamentos em saúde bucal. Revista Paulista Odontologia 2002; 24(5).

35. Flores EMTL, Drehmer TM. Conhecimento, percepções, comportamentos e representações de saúde e doença bucal dos adolescentes de escolas públicas de dois bairros de Porto Alegre. Ciênc Saúde Coletiva 2003; 8:743-52.

36. Lacerda JT, Simionato EM, Peres KG, Peres MA. Traebert J, Marcenes W. Dental pain as the reason for visiting a dentist in a Brazilian adult population. Rev Saúde Pública. 2004; 38: 453-8.

37. Silva Sobrinho AR, Araújo FAC, Lima NLB, Ferreira SJ, Sette-de-Souza PH. Agravos de saúde buccal na população quilombola brasileira: uma revisão de escopo. Rev Panam Salud Publica. 2022; 46e 134. https://doi.org/10.26633/10.26633/RPSP.2022.134.