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Self-reported oral health of a quilombola population in the semi-arid region of Piauí

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***Keywords*— Collective Health; Dental conditions; Quilombola population.**

***Abstract*— *The needy epidemiology of oral health in quilombola populations has been demonstrated by different researches, with the intention that studies be carried in order to identify and determine situations that are liable to be resolved through the help of social and health policies. Objective. To know the perception of oral health regarding oral discomfort and to compare it with general health in a quilombola population in the semi-arid region of Piauí. Methodology. Cross-sectional, descriptive and analytical study. From the adult and elderly population, a sample was calculated considering a margin of error of 5% and 90% of reliability, obtaining a total of 120 people as a minimum sample. Results. Inhabitants of the Canabrava, Tronco and Custaneiras quilombola communities participated - whose age ranged from 21 to 81 years old, SD±16.0. There is a predominance of: married (67.5%), female (60.8%) small farmers (90%), non-retired (71.7%), income of up to 01 (one) minimum wage (58.3%), and incomplete primary school (42.5%). Oral discomfort had a higher percentage due to the variable -Feels dry mouth (30.8%). There was a significant association (p= 0.031) between the perception of general health (excellent, reasonable and poor) and having oral health problems. Conclusion. The association between the perception of general health and having oral health problems reinforces the fact that the poor condition of oral health*

denotes a close relationship with the living conditions of this society, whether assisted or not by the government.

I. INTRODUCTION

Race is a limiting factor in the use of dental services, given that a study, even after adjustments, shows that black people remain with greater difficulty in using oral health services[1].

In order to mitigate inequalities in the racial context, Brazil, by Law no. 12,288, of July 20, 2010, established the Racial Equality Statute. In it, the black population is defined as the group of people who declare themselves to be black and brown, according to the color or race issue, used by the Brazilian Institute of Geography and Statistics (IBGE), or who adopt an analogous self-definition. Likewise, it is intended to guarantee to the black population the realization of equal opportunities, the defense of individual, collective and diffuse ethnic rights and the fight against discrimination and other forms of ethnic intolerance[2].

The facts of Brazilian history highlight a trajectory of social conflicts. With the 1988 Constitution, fundamental rights and guarantees were instituted, however, legal certainty, the regulation of law and the bureaucratization of procedures prevent many of these rights from being achieved by those who most need them[3].

Researchers investigated traditional health systems (THS) from three rural communities in Northeast Brazil and three quilombola communities on the southern coast of Brazil, assuming the idea that the resilience of THS and communities are mutually influenced. They identified, however, that the Federal Government's Family Health Program (PSF) is an important public policy introduced in 1990. It provides easy access to Biomedicine in isolated communities, through the establishment of health posts and community health agents. The agents are trained in the places, by the National Health Foundation, to promote health prevention actions and help people to access them[4].

The greater importance is highlighted by the fact that these communities are almost always geographically isolated and with limited access to health care. Therefore, additional research and data collection contribute to the implementation of public health and policies that reduce the vulnerability of these communities and incorporate an expanded concept of health and well-being[5].

The poor epidemiology of oral health in quilombola populations is demonstrated by several studies. Data from two quilombola communities in the State of Bahia show that, in one, 40% of young adults had carious lesions, and edentulism[6] affected 13.4% of adults. In the other quilombo community, 5% of young adults had carious lesions, and 18% of adults had edentulism[6]. Another study, when estimating the prevalence of tooth extractions in 864 people from quilombola communities, found that tooth extractions were reported by 82.0% of the quilombola, 49.8% with ≤5 teeth and 32.2% with >5 teeth extracted.

They also refer to the fact that having had dental caries was associated with a four times greater chance of having teeth extracted[7]. Furthermore, according to findings from a survey in southern Brazil, negative self-perception of oral health was reported by 53.1% of the quilombola surveyed, in which satisfaction with chewing and with oral appearance was related to a higher prevalence of negative perception of oral health[8].

In this perspective, the production of knowledge about social inequities in health denotes a multiplicity of conceptual, theoretical and methodological perspectives, which are reflected in the field of oral health, which gives rise to the need to analyze the main topics related to this field[9].

In order for studies to be carried out in quilombola communities in order to identify and determine situations that can be resolved with the help of social and health policies, the objective was to know the perception of oral health regarding oral discomfort and compare it with general health in a quilombola population in the semi-arid region of Piauí.

II. METHODOLOGY

This is a cross-sectional, descriptive and analytical study. The referenced population of adults and elderly people was initially determined by all the inhabitants of the three communities, who are aged between 21 and 81 years. The age designation was based on the Children and Adolescents Statute[10] to determine the beginning of adulthood, while the elderly, those aged 60 and over, according to the National Health Policy for the Elderly - PNSPI11.

With the beginning of the pandemic caused by the new coronavirus - covid-19, there was necessary a suspension of data collection. As, however, the census would have 211 inhabitants, a sample of this total was calculated considering a margin of error of 5% and 90% of reliability, obtaining a total of 120 people as a minimum sample amount. Therefore, a representative, but not

random, sample was obtained from the quilombola population referring to the aforementioned locations, giving continuity to the analysis and discussion of the data.

The questionnaire was composed of socio-demographic variables (age, sex, marital status, retirement, income and occupation), perception of general health (excellent, fair and poor) and oral health (oral discomfort).

As for the characteristic of oral health, those referring to oral discomfort were analyzed, according to Saintrain et al.,[12] (2018) such as: Feel dry mouth (yes/no); period (day/night), Difficulty chewing and swallowing food (yes/no); Problems with the taste of food (yes/no); Burning sensation in the mouth (yes/no); Feel pain for no apparent reason (yes/no); Notice swelling in the mouth that makes it difficult to use dentures (yes/no); Change in voice (yes/no); and the number of oral health problems.

Data were collected from November 2019 to February 2020, tabulated and analyzed using the "Statistical Package for Social Science" software – SPSS® version 24.0 IBM® Absolute and relative frequency, mean, standard deviation, minimum and maximum were calculated. The outcome "self-reported general health" was categorized as excellent, fair and poor, and its prevalence was compared with all other variables using the chi-square or Fisher's exact tests. For this, quantitative variables were categorized, and in all inferential procedures a significance level of 5% was adopted.

The research project was submitted to the Research Ethics Council of the University of Fortaleza, having been approved by Opinion No.0. 3,661,826/19. At the beginning of each interview, the Free and Informed Consent Term was read and signed in two copies, one being delivered to the participant and the other to this author.

III. RESULTS

A total of 120 representatives of the quilombola community participated in the survey. Among the socio-demographic characteristics, there was the participation of three locations - Canabrava, Tronco and Custaneiras – from which the participants' ages ranged from 21 to 81 years, SD ±16.0.

There is a predominance of: married (67.5%), female (60.8%), small farmers (90%), non-retired (71.7%), income of up to 01 (one) minimum wage (58.3%), and incomplete elementary school (42.5%), as shown in Table 1.

Table 1. Socio-demographic characteristics of inhabitants of the quilombola communities who participated in the survey. Picos - Piauí, 2020.

Variables	N	%
Location		
Canabrava	72	60.0
Tronco	33	27.5
Custaneiras	15	12.5
Age Range		
21 to 29	16	13.3
30 to 39	29	24.2
40 to 49	27	22.5
50 to 59	24	20.0
60 or more	24	20.0
Marital status		
Single	20	16.7
Married	81	67.5
Divorced	2	1.7
Widowed	4	3.3
Other	13	10.8
Sex		
Masculine	47	39.2
Feminine	73	60.8
Retired		
Yes	34	28.3
No	86	71.7
Income		
1 MW	70	58.3
From 2 to 5 MW	4	3.3
Bolsa família	36	30.0
Not informed	10	8.3
Ocupation		
Farmer	108	90.0
Public server	3	2.5
Self-employed	2	1.7
Other	7	5.8
Scholastic achievement		
None	27	22.5
Elementary Education – incomplete	51	42.5

Elementary Education – complete	10	8.3
High Education – incomplete	11	9.2
High Education – complete	18	15.0
Higher education	3	2.5

Source: Research data

Table 2 shows the frequency distribution related to oral discomfort, represented in a higher percentage by the variable "Feel dry mouth", with a percentage of 30.8% and expressing greater aggression during the night (62.2%). Sixty-one participants (50.8%) reported that they did not have any "oral health problems".

Table 2. Self-reporting oral discomfort of residents of quilombola communities. Picos-Piauí, 2020.

Oral discomfort	N	%
Feel dry mouth		
Yes	37	30.8
No	83	69.2
Period (n=37)		
Day	14	37.8
Night	23	62.2
Difficulty chewing and swallowing food		
Yes	14	11.7
No	106	88.3
Problems with the taste of food		
Yes	12	10.0
No	108	90.0
Burning sensation in the mouth		
Yes	12	10.0
No	108	90.0
Feel pain for no apparent reason		
Yes	14	11.7
No	106	88.3
Notice swelling in the mouth that makes it difficult to use dentures		
Yes	6	5.0
No	114	95.0
Change in voice		
Yes	13	10.8
No	107	89.2
Number of oral health problems		
0	61	50.8
1	31	25.8
2 or more	28	23.4

Source: Research data

Table 3 shows the results regarding oral discomfort and its relationship with general health, stratified into excellent, fair and poor...

It appears that the majority rated their health as fair. There was a significant association (p=0.031) between the perception of general health (excellent, fair and poor) and having oral health problems, noting the fact that, of the 61 participants who did not have oral health problems, 31 .1% of them considered their general health to be excellent, while those who reported two or more problems, only 7.1% considered their health to be excellent.

For the other variables, there was no statistically significant relationship. It is noteworthy, therefore, that for those who had no difficulty in chewing and swallowing food, 27.4% of them self-rated their health as excellent, while those who had difficulty, only 7.1% reported their health as such. In the same direction, percentage differences were detected for the other variables.

Table 3. Self-reported general health, according to oral health problems of quilombo residents. Picos-Piauí, 2020.

Variables Oral Discomfort	Total	General health						Value p
		Excelent		Reasonable		Bad		
		N	%	n	%	n	%	
Feel dry mouth								0.249
Yes	37	7	18.9	24	64.9	6	16.2	
No	83	23	27.7	54	65.1	6	7.2	

Difficulty chewing and swallowing food								0.172
Yes	14	1	7.1	11	78.6	2	14.3	
No	106	29	27.4	67	63.2	10	9.4	
Problems with the taste of food								0.055
Yes	12	0	0.0	10	83.3	2	16.7	
No	108	30	27.8	68	63.0	10	9.3	
Burning sensation in the mouth								0.182
Yes	12	1	8.3	11	91.7	0	0.0	
No	108	29	26.9	67	62.0	12	11.1	
Feel pain for no apparent reason								0.819
Yes	14	3	21.4	9	64.3	2	14.3	
No	106	27	25.5	69	65.1	10	9.4	
Notice swelling in the mouth that makes it difficult to use dentures								0.657
Yes	6	1	16.7	4	66.7	1	16.7	
No	114	29	25.4	74	64.9	11	9.6	
Change in voice								0.109
Yes	13	1	7.7	12	92.3	0	0.0	
No	107	29	27.1	66	61.7	12	11.2	
Number of oral health problems								0.031
0	61	19	31.1	39	63.9	3	4.9	
1	31	9	29.0	17	54.8	5	16.1	
2 or more	28	2	7.1	22	78.6	4	14.3	

Fisher's Exact Test.

In Table 4, the results indicate that the self-perception of health status in the last year, stratified into better, equal and worse, related to oral discomfort, was not associated with any of the variables. Although, in the findings, a large percentage of the study respondents reported that in this relationship with oral discomfort their health is the same as it was in the last year, the high percentage in the similarity that health is better and worse must also be considered.

Table 4. Perception of health in the last year, according to oral health problems of residents of quilombola communities. Picos-Piauí, 2020.

Oral discomfort	**Total**	**Health in the last year**						**Valor p**
		Better		**Equal**		**Worse**		
		n	**%**	**n**	**%**	**n**	**%**	
Feel dry mouth								0.331[1]
Yes	37	8	21.6	18	48.6	11	29.7	
No	83	24	28.9	44	53.0	15	18.1	
Difficulty chewing and swallowing food								0.753[2]
Sim	14	4	28.6	6	42.9	4	28.6	
No	106	28	26.4	56	52.8	22	20.8	

Problems with the taste of food								0.368[2]
Yes	12	4	33.3	4	33.3	4	33.3	
No	108	28	25.9	58	53.7	22	20.4	
Burning sensation in the mouth								0.612[2]
Yes	12	3	25.0	5	41.7	4	33.3	
No	108	29	26.9	57	52.8	22	20.4	
Feel pain for no apparent reason								0.268[2]
Yes	14	6	42.9	5	35.7	3	21.4	
No	106	26	24.5	57	53.8	23	21.7	
Notice swelling in the mouth that makes it difficult to use dentures								0.202[2]
Yes	6	1	16.7	2	33.3	3	50.0	
No	114	31	27.2	60	52.6	23	20.2	
Change in voice								1.000[2]
Yes	13	3	23.1	7	53.8	3	23.1	
No	107	29	27.1	55	51.4	23	21.5	
Number of oral health problems								0.051[1]
0	61	16	26.2	38	62.3	7	11.5	
1	31	7	22.6	14	45.2	10	32.3	
2 or more	28	9	32.1	10	35.7	9	32.1	

Chi-square test

IV. DISCUSSION

Although oral health is part of general health[13], it is often neglected in this relationship. This reflection on oral discomfort in the quilombola population contributed to the evaluation of their well-being, which is what differs this research from most other studies related to oral health in this part of the population. In this context, researchers emphasize that most of the indicators used to assess oral health status almost always refer to specific clinical studies, such as dental caries, periodontal disease and use or need for dentures. However, when evaluating the relationship between Subjective Well-being - SWB - and self-reported oral discomfort, they reveal that poor oral health leads to physical, psychological and/or social problems that directly interfere with their well-being[12].

Quilombola communities, by their nature, share aspects of vulnerability with other populations established in rural areas and with other black populations in Brazil. Therefore, oral health, in addition to having an intensive relationship with the way a person perceives their health as a whole, is also influenced by beliefs, by the sociodemographic profile, among other circumstances[8].

Regarding the socio-demographic profile, in this study, the greater participation of women is corroborated by research carried out in this same area and which showed that this was significantly higher when compared to men. This pre-existing predominance is highlighted, and following the trend regarding the sex of people, especially those over sixty years old[14, 15]. However, a higher prevalence of farmers was detected, a difference due, of course, to the lifestyle adopted by men and women in the countryside.

In view of the above, one has to consider the fact that most of the participants earn only a minimum wage, followed by those who support themselves through the contribution of the "Bolsa Família" program. In this context, it is important to understand how social inequalities are expressed in oral health, both in relation to the health-disease process and from the perspective of oral health care[9].

From the educational point of view, the findings reveal a population with low education, in which 22.5% are illiterate and 42.5% have only incomplete elementary education. It should be noted that socioeconomic conditions interfere in the quality of healthcare, especially in the search for knowledge in health education, in the principles that govern the promotion and preventive measures between health education and oral health.

A study analyzing the socioeconomic characterization revealed that the most observed condition was that of four years or less of schooling, reported by 57% of the quilombolas, who felt influences in their lives as a result of oral conditions: 1.8% stopped having fun, 7.6% reported difficulty speaking and 10.5% mentioned embarrassment when smiling or talking[16].

Researchers emphasize that black people have a 22% increased risk of losing teeth, compared to whites, reinforcing the inequity in access to oral health that affects the majority of self-declared black people in Brazil, also as quilombolas[17]. In this circumstance, and corroborating the findings of this research, this is what was observed by other researchers, when referring to the fact that the main influx of the oral condition, reported by quilombolas in their daily life, was related to the smile.

Furthermore, among the main complaints about impacts on oral health, eating (12.9%), talking (12.5%) and sleeping (12.2%) were recorded. In this perception in the analysis formulated by this study, the researchers expose the shock of neglected oral health conditions in minority populations, reinforcing the need for public investments in these vulnerable communities[18].

One must consider the fact that, historically, oral health care models have evidenced the predominance of mutilating dental practices, as well as a mode of private organization, technical operation, which signal challenges, which are reflected in the path of oral health. Therefore, while the most favored social groups have access to private dental offices and treatment technologies that overvalue aesthetics, on the other hand, other social groups suffer from untreated caries, tooth loss, pain and dental infections, and even with greater difficulties in accessing dental services, which reflect signs of exclusion and social inequities[9].

V. CONCLUSION

The significant association (p=0.031) between the perception of general health (excellent, fair and poor) and having oral health problems confirms the fact that most participants who did not have oral health problems considered their health general as excellent, while those who presented two or more problems, only 7.1% consider having this classification.

The findings reinforce the fact that a poor oral health condition denotes a close relationship with the living conditions of this society, whether assisted or not by the public power. There is, however, a need for greater determination in this area, and public policies must be implemented in relation to oral health, especially in quilombola communities.

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