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Original Research Article

Oral health self-perception among adults at a primary healthcare unit

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Abstract

Introduction: Oral health self-perception is the individual assessment of the oral conditions. **Objective:** To evaluate the oral health self-perception of adults and the factors that influence this perception. **Material and methods:** A cross-sectional study was conducted at a primary healthcare unit in São Luís, Maranhão. Data were collected through the administration of a not validated questionnaire and a clinical examination at the dental office. The outcome was oral health self-perception and the independent variables were age, gender, ethnicity, marital status, schooling, monthly household income, dental treatment, the conclusion of treatment, last type of service used, toothache in the previous six months, untreated dental caries, missing teeth, the DMFT index, root caries and removable partial denture. Descriptive statistics and the chi-square tests were performed with a 5% level of significance. **Results:** The sample was composed by 129 adults aged 25 to 55 years. The female gender (80.6%), brown skin color (62.8%) and low income (55.8%) were the most prevalent independent variables. Ninety-three percent of the sample had undergone some type of dental treatment, but only 36.4% concluded treatment. Seventy-nine percent perceived their oral health as negative. No significant associations were found between a negative self-perception and the independent variables analyzed. **Conclusion:** Most of surveyed individuals had a negative self-perception of their oral health, however, the perception was not associated with any of the exploratory variables.

Introduction

The health self-perception is the interpretation that one individual has about his/her health [1], scoring a quality degree from satisfaction to necessities. This evaluation is essential because the people's behavior is conditioned by this perception [7]. In the context of the oral health, this evaluation is associated with the general health and the behaviors involving the health care [5]. A negative self-perception may indicate the presence of oral problems due to the lack of health care, inadequate care or lack of information on oral health [2].

Studies evaluating the oral health self-perception of adolescents, young adults, and the elderly shows that the negative self-perception is related to the clinical, social, and economic factors. Factors as low educational level, unemployment, long period since the last dental appointment, treatment requirements, lost teeth, dry mouth, and difficulty in eating are related to the negative self-perception [6, 8, 12-14]. Other studies found that the positive oral health self-perception is associated with low ages, high income, higher educational level, low DMFT index and small time elapsed since the last appointment [4, 11].

The oral health self-perception is a fundamental question, together with a normative assessment to guide the public politics [16]. The subjective vision enable the health managers to evaluate comprehensively the needs and allow the planning of actions for oral health care [4].

Considering that different cultural aspects may result in different health self-perception [4], this study aimed to evaluate the oral health self-perception of adults treated at a primary healthcare unit and the factors interfering on these perceptions.

Material and methods

This study was submitted and approved by the Institutional Review Board regarding to ethical aspects (protocol #854.682/2014). All patients read and signed a Free and Clarified Consent Form.

This cross-sectional study was performed from June /2014 to September/2014 with individuals attending to the primary healthcare unit in the city of São Luís, Maranhão, Brazil. The individuals were asked to participating into the study in the waiting room. Those who met the inclusion criteria read and signed the free and clarified consent form. The inclusion criteria comprised: adults, attending the primary healthcare unit for other

appointments (not the dentist), not edentulous, without orthodontic appliance, and without mental and cognitive impairment.

The sample size was calculated by considering the main clinical condition investigated (dental caries). A prevalence of 95.5% of dental caries for the population aged between 35 and 44 years, of the city of de São Luís – MA [3]. With a level of confidence of 95%, a power of 80%, and standard error of 5%, the minimum sample size was 134 individuals. No adjustment for the finite population was executed because the information about the number of individuals attending the healthcare unit during the study period could not be obtained.

A questionnaire was applied through interview by the researcher N.P.V. This questionnaire comprised demographic socioeconomic data, use of the dental services, self-reported oral morbidity (tooth pain in the last six months) and oral health self-perception (satisfaction with teeth/mouth, with the following answer options: “very satisfied”; “satisfied”; “nor satisfied neither dissatisfied”; “dissatisfied”; “very dissatisfied”). This variable was the study outcome, and dichotomized into positive “very satisfied” and “satisfied”) and negative (“nor satisfied neither dissatisfied”; “dissatisfied”; and “very dissatisfied”).

The clinical examination was carried out in a dental office inside the healthcare unit, under the light of the dental chair, with the aid of dental mirror, WHO probe, and gauze [18]. The data collection followed all the biosecurity criteria with gloves, glasses, mask, cap, and disposable apron. The clinical data was collected regarding crown and root caries, restored and lost teeth, removable partial denture (RPD) (provisional or definitive) [18].

A pilot study was conducted with 34 individuals to test the study methodology (application of the questionnaire and clinical examination) and calibrate the examiner for the DMFT index ($K = 0.911$). The data of this pilot study was not used in this main study.

The Statistical Package for the Social Sciences (SPSS, version 21.0, IBM Corporation, Armonk, New York, USA) was used for analyzing the data, including the descriptive analyses and chi-square test, at the level of significance of 5%.

Results

Of 489 individuals invited to participate in the study, 355 did not meet the inclusion criteria and five refused in participating. Thus, the response rate was of 96.3%. The studied convenience sample

was composed by 129 individuals aged between 25 and 55 years, 80.6% females, 62.8% white. The month familial income was below two minimum wages for 69% of the sample. Individuals married or in stable union were 61.2% of the total sample. The negative oral health self-perception was 79.1% (table I).

Table I – Sample characteristics (n = 129)

	n (%)
Age	
27 to 34 years	57 (44.2)
35 to 52 years	72 (55.8)
Gender	
Female	104 (80.6)
Male	25 (19.4)
Marital status	
Single/divorced/widower	50 (38.8)
Married/stable union	79 (61.2)
Educational level	
< 9 study years	37 (28.7)
≥ 9 study years	92 (71.3)
Month familial income	
Below two minimum wages	71 (69.9)
From 2 to more than 15 minimum wages	31 (30.4)
Dental treatment	
No	9 (7.0)
Yes	120 (93.0)
Treatment conclusion	
No	82 (63.6)
Yes	47 (36.4)
Pain tooth at the last 6 months	
No	91 (70.5)
Yes	38 (29.5)
Oral health self-perception	
Positive	21 (16.3)
Negative	102 (79.1)
RPD*	
No	87 (67.4)
Yes	42 (32.6)
Crown caries	
Without caries	31 (24.0)
1 to 3 teeth with caries	58 (45.0)
≥ 4 teeth with caries	40 (31.0)
Root caries	
0	103 (79.8)
≥ 1	26 (20.2)
Lost teeth	
No	29 (22.5)
Yes	100 (77.5)
DMFT	
≤ 14	100 (77.5)
≥ 14	29 (22.5)

* Provisional or definitive

For the studied sample, no independent variable was associated with the outcome (table II).

Table II – Prevalence of the oral health self-perception according to the demographic, socioeconomic variables, use of services, self-reported oral morbidity, and clinical conditions

Independent variables	Positive oral health self-perception n (%)	Negative oral health self-perception n (%)	P
Age			
35-52 years	11 (52.4)	58 (56.9)	0.706
27-34 years	10 (47.6)	44 (43.1)	
Gender			
Male	5 (23.8)	19 (18.6)	0.557*
Female	16 (76.2)	83 (81.4)	
Race			
Black. yellow. and indigenous	5 (23.8)	16 (15.7)	0.371*
Brown	14 (66.7)	65 (63.7)	
White	2 (9.5)	21 (20.6)	
Marital status			
Single/divorced/widower	10 (47.6)	38 (37.3)	0.375
Married/stable union	11 (52.4)	64 (62.7)	
Educational level			
< 9 study years	7 (33.3)	27 (26.5)	0.522
≥ 9 study years	14 (66.7)	75 (73.5)	
Month familial income			
Below two minimum wages	13 (61.9)	71 (69.9)	0.490
From 2 to more than 15 minimum wages	8 (38.1)	31 (30.4)	
Dental treatment			
No	1 (4.8)	7 (6.9)	1.000*
Yes	20 (95.2)	95 (93.1)	
Treatment conclusion			
No	11 (52.4)	67 (65.7)	0.249
Yes	10 (47.6)	35 (34.3)	

Independent variables	Positive oral health self-perception n (%)	Negative oral health self-perception n (%)	p
Last type of service used			
Never went to the dentist	0 (0.0)	1 (1.0)	0.939*
Philanthropic	1 (4.8)	4 (3.9)	
Public	10 (47.6)	49 (48.0)	
Private/insurance	10 (47.6)	48 (47.1)	
Pain tooth at the last 6 months			
Yes	4 (19.0)	31 (30.4)	0.294
No	17 (81.0)	71 (69.6)	
Non-treated dental caries			
≥ 4 teeth with caries	8 (38.1)	31(30.4)	0.607
1 to 3 teeth with caries	7 (33.3)	46 (45.1)	
No teeth with caries	6 (28.6)	25 (24.5)	
Lost teeth			
Yes	14 (66.7)	82 (80.4)	0.166
No	7 (33.3)	20 (19.6)	
DMFT			
13 to 25	8 (38.1)	32 (31.4)	0.836
7 to 12	7 (33.3)	38 (37.3)	
0 to 6	6 (28.6)	32 (31.4)	

* Fisher's exact test

** Data lost for the oral health self-perception for six individuals

Discussion

Most of the studied individuals (79.1%) showed negative oral health self-perception, a result different from other study on similar age range with a negative oral health self-perception of 33.2% [8]. The different prevalence can be explained by the different socioeconomic conditions of different areas. While this present study was conducted in a Northeastern city of Brazil, with unfavorable socioeconomic situation for most of the population, the study of Luchi *et al.* [8] was conducted in a Southern city of Brazil, with one of the highest indexes of human development among the Brazilian cities.

Although the low socioeconomic conditions are provenly associated with the negative oral health self-perception [6, 8, 13, 14], in the present study, a significant association between income and negative self-perception did not occur, even with 69.9% of the individuals dissatisfied with the oral health received below two minimum wages. This lack of association may be related to the small sample size.

The Brazilian Unified Health System has basic principles as integrality and hierarchy that at most times are not fulfilled because of a small oriented management. Many times, the clientelism and the polarization of the oral health services rupture with the unified health system equity, resulting in difficulty in accessing the dental treatments [10]. Even those who has access may not have all the treatment requirements satisfied. Of the individuals with negative oral health self-perception, 48% searched for public dental treatment, which was expected, because 69.9% had an income below two minimum wages.

Economically vulnerable individuals tend not to search the dental treatment. When they do search, most of time, they did not complete the treatment. In this present study, most of the individuals with negative oral health self-perception already had undergone dental treatment (93.1%). However, 34.3% concluded the treatment. This pointed out that the treatment conclusion does not assure the satisfaction with either dental services or oral health.

In this present study, the individuals aged between 35 and 52 years were more dissatisfied with the oral health than those aged between 27 and 34 years. While some studies agree with these findings indicating that the oldest individuals had a more negative oral health self-perception [12, 13], other studies observe the contrary result. In a research performed with elderly aged from 60 years, in which most (54.5%) of the participants were classified into low socioeconomic level, the oral health self-perception was considered as positive, even in low conditions of oral health. Even with signs and symptoms of pain, difficult in mastication, appearance impairment, the health perception of the elderly is affected by the belief that some pain and impairments are natural of the aging process [7, 17]. This characteristic, so-called resignation, was also found in a study conducted in a Brazilian metropolis with 45 institutionalized elderlies from different social classes. Many faced the limitations as aging consequences and not as a problem to be corrected [6].

This study found that the individuals were dissatisfied with the oral health, suggesting that the found clinical conditions accounted for the negative perception. It is worth noting that a considerable percentage of the sample showed dental caries (76%) and 77.5% exhibited teeth lost.

This study exhibited some limitations, such as the convenience sample that impairs the extrapolation of the findings to the target population; and the small sample size that did not allow verifying the associations already proven by populational-based studies. Moreover, because this is a cross-sectional study, a cause-effect relationship could not be established. Thus, further studies are necessary to verify the oral health self-perception of these population whose socioeconomic conditions are known to be precarious. Studies with longitudinal design will enable to evaluate the provided public services.

Conclusion

Most of the studied individuals showed a negative oral health self-perception. However, the self-perception was not associated with none of the studied exploratory variables.

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