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Perception of oral health by patients who use dental clinics

Percepção de saúde bucal em pacientes usuários de clínica odontológica

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Resumo

Introdução: O uso de indicadores clínicos para avaliar o estado de saúde bucal e a necessidade de tratamento é reconhecido como tendo limitações, atualmente têm sido utilizados outros fatores entre eles os sociais e a qualidade de vida. **Objetivo:** Este trabalho teve como objetivo a avaliação da autopercepção da saúde bucal, em adultos usuários das clínicas de Odontologia de uma universidade pública. **Metodologia**: O estudo do tipo transversal teve uma amostra de 86 participantes. Foram utilizados um questionário, constando dos dados sócio demográficos, e a aplicação do índice GOHAI. A análise estatística foi descritiva, com dados absolutos e percentuais, através do programa Epi Info. versão 6. **Resultado:** A maioria dos usuários era composta por mulheres (89,7 %), com estado civil de casadas (69,8 %), na faixa etária de 35 a 38 anos (39,6 %), tinham ensino médio completo (32,6 %), com renda mensal de 1 a 3 salários mínimos (79,1 %). O resultado do índice GOHAI foi classificado como baixo, apresentando valor do escore de 27,06. **Conclusão**: Foi verificado um baixo índice e impacto negativo das condições de saúde bucal na vida diária dos usuários avaliados.

Descritores: Saúde bucal; qualidade de vida; saúde do adulto; condições de saúde.

Abstract

Introduction: The use of clinical indicators to evaluate oral health status and the need for treatment is recognized as having limitations, and nowadays other factors, among them social and quality of life, have been used. **Objective:** The aim of this study was to evaluate the self-perception of oral health in adults using the Dental clinics at a public university. **Methodology**: This cross-sectional study had a sample of 86 participants. A questionnaire consisting of sociodemographic data and application of the GOHAI index were used. Descriptive statistical analysis was performed with absolute and percentage data, using the Epi Info. version 6 software program. **Result:** The majority of users were women (89.7 %); marital status: married (69.8 %); age-range from 35 to 38 years (39.6 %), they had completed high school (32.6 %), and had a monthly income from 1 to 3 minimum wages (79.1 %). Results of the GOHAI index were classified as low, presenting a score value of 27.06. **Conclusion**: A low index and negative impact of oral health conditions on the daily lives of the evaluated users was verified.

Descriptors: Oral health; quality of life; adult health; health status.

INTRODUCTION

Self-evaluation of oral health is a multidimensional variable, and may be related to both clinical and subjective factors. Clinical characteristics alone are not adequate measurements for evaluating dental treatment needs, and self-perception stimulates dental self-care and motivates the population to seek dental care[1-3].

The subjective factors of oral diseases may be: age, income, gender in addition to personal values, and cannot be summed up as discomfort and pain only, but also reflect psychological and social aspects, such as personal appearance, communication and interaction with other persons[4,5].

The "Geriatric Oral Health Assessment Index (GOHAI) – Atchison, Dolan[6] (1990), validated for Brazil[7] was developed to evaluate the oral health conditions of elderly persons, in a format that would allow its use in both epidemiological studies and in clinical practice. However, it has been proved that the results obtained with the application of GOHAI were satisfactory in other types of populations, including low-income groups, youngsters and adults of all ages[8].

Adults are the majority of the population that demand dental services and that have a decisive influence on the behavior of their dependents. The majority of oral health studies in this population only evaluate the clinical indicators, without investigating the aspects relative to physical and psychosocial functions, and relative to pain and/or discomfort[9].

In view of the foregoing, it is important to study the adult patient who seeks the health services, to evaluate the degree of oral health perception, and the socio-demographic profile of this population.

METHODOLOGY

The study was conducted in a municipality in the Brazilian Northeast, which is considered one of the main complexes of economic development in the interior of the country, with a population of 379,871 inhabitants and human development index of 0.72[10].

The study design was of the cross-sectional type. Data was collected by using a form containing two parts. The first part, prepared by the authors of the research, considered the following variables: gender, age, marital status, occupation, educational level, family income, and inclusion in government social programs. The second part was composed of the Geriatric Oral Health Assessment Index (GOHAI) for the measurement of oral health self-perception.

The sample was composed of patients of both genders in the age-range from 35-44 years, who sought the dental service of the school clinic of the dentistry course at a public state university, for the first dental consultation.

For the effect of calculating the sample size, an expected percentage equal to 50% in each response was estimated, with a margin of error of 5.0% and a confidence interval of 95.0%, thus resulting in a universe 385 participants. However, as this concerned a finite population with a mean of 100 patients per month attended at the clinic, in which the characteristic of homogeneity of the sampling data was outstanding, it was necessary to verify the need for the use of a factor of correction, given by the following formula: $\frac{n_0}{N} \leq 0{,}05$. Therefore the factor of correction $n = \frac{n_0}{1 + \frac{n_0}{N}}$ was used, by which a total of 85 users was obtained. An addition of 10% for losses was made, arriving at 93 participants as the sample size.

For this study, the following inclusion criteria were determined: The subject must be undergoing treatment during the research, be an adult in the age-range selected for the study, and be a resident of the municipality. For sample selection the simple random sampling technique was used. During the course of three months, when the daily clinical attendances began in the triage center, it was observed whether the patients fitted into this age range, and a patient was randomly selected from the list provided.

The formula was applied to those in the waiting room, who were available for holding the interview. The study was preceded by a pilot study with two data collectors who interviewed patients of another age range, which occurred with 10% of the total sample. The purpose of this was to adjust the collection of data and analyze the methods of evaluating the variables used, planning of the study, time spent on holding the interview, and the clarity of the instrument. The intention of this pre-test was to verify the use of the data collection instrument, and apply the Kappa Test of Agreement, in which the value of 0.89 was obtained, considered "excellent" agreement. The dependent variable of the study was *perception of oral health*.

During the pilot study, it was found that the study participants had extreme difficulty with self-reporting their race, an item present in the socio-demographic questionnaire; therefore the option was taken to remove this information, since its removal would not interfere in the results of the research.

The GOHAI index contains twelve questions, which allow oral health to be analyzed with regard to three basic functions: (a) physical, including dietary information, speech and swallowing; (b) psychological, comprising concern about or care of one's own oral health, dissatisfaction with appearance, self-consciousness relative to oral health and the fact of avoiding social contacts due to dental problems; (c) pain or discomfort, considering the use of medication to relieve these feelings, provided that they arise in the mouth.

The questions provide the following response conditions: always, sometimes and never, with reference to the last three months. For the responses to these questions (always, sometimes and never), there are weights/scores (1, 2 and 3, respectively), which added together result in the value of the index. In questions 3, 5 and 7 the weights/scores for the responses are inverted (3, 2 and 1). The higher the score, the more significant the perception of the individual's oral health. These values range from 12 to 36, classified as high (34 to 36), moderate (31 to 33) and low (below 30)[11].

The study was evaluated and approved by the Research Ethics Committee of the State University of Paraíba (Protocol No. 0295.0.133.000-08), in compliance with all the requirements and rules of Resolution No. 196 of the National Health Council (CNS).

The data collected were grouped and coded using the software program Epi Info version 6, and the results were presented in the form of graphs and tables. In order to obtain the absolute and percentage frequencies, descriptive statistical techniques were used. The study followed the criteria adopted in STROBE (Strengthening the Reporting of Observational Studies in Epidemiology).

RESULT

The interviews were held with 93 research subjects, however, 7 of them withdrew their consent during the course of the interview being held, finalizing with n = 86 participants. The majority of the sample was composed of patients of the female gender (89.7%); marital status – married, or lived within a stable partnership (69.8%), in the age-range from 35 to 38 years (39.6%). As regards educational level 32.6% had high school education, 52.3% worked, with the monthly income of 79.1%, being comprised within the range from 1 to 3 minimum wages. A small majority of those researched, 58.1% were not included in any Federal Government assistance program, and 74.4% owned their homes (Table 1).

Table 1. Socio-demographic Characteristics of patients who used the dental clinic

Variable	N	%
GENDER		
Male	24	10.3
Female	62	89.7
Total	86	100
MARITAL STATUS		
Single/Widowed/Divorced	26	30.2
Married/Stable Union	60	69.8
Total	86	100
AGE GROUP		
35 to 38	34	39.6
39 to 41	26	30.2
42 to 44	26	30.2
Total	86	100
STUDY		
Yes	09	10.5
No	77	89.5
Total	86	100
EDUCATION		
No schooling	02	2.3
Primary Schooling	34	39.5
High schooling.	44	51.2
Higher Education	06	7.0
Total	86	100
WORK		
Yes	45	52.3
No	41	47.7
Total	86	100
MEAN INCOME		
> 1 minimum wage	14	16.3
1 to 3 minimum wages	68	79.1
< 3 to > 5 minimum wages	03	3.5
≥ 5 minimum wages	01	1.2
Total	86	100
PARTICIPATION IN GOVERNMENT SOCIAL PROGRAM		
Yes	36	41.9
No	50	58.1
Total	86	100
HOUSING		
Rented	22	25.6
Own	64	74.4
Total	86	100

According to Table 2, one observes that 76.7% of the adults had never limited the type or quantity of foods due to problems with their teeth or dentures, and that half of the sample had never presented any problem when chewing hard foods. The major portion of the adults (90.7%) always swallowed foods comfortably, and 68.6% had never had any difficulties with speech due to problems with their teeth or dentures. Almost half of the researched subjects (46.5%) responded that they were sometimes able to eat anything at all without feeling discomfort.

As regards interpersonal contacts, due to problems with their teeth or dentures (69.8%) of the population had never limited them. When asked about having used medications to alleviate pain or discomfort, 53.5% affirmed they had never used this type of medication. Over half of the sample (57.0%) had never been satisfied with the appearance of their teeth or dentures, and 52.3% of the researched subjects affirmed that they were concerned about or cared for their teeth, gums or dentures. Nevertheless, it was verified that 38.4% of the adults never became nervous due to problems with their teeth, gums or dentures (Table 2).

Therefore, as shown in Table 3, low perception of oral health (77.9%) was verified, obtaining a mean GOHAI index of 27.06.

When the bivariate analysis of the GOHAI index was performed with the independent variables, the only variable that was significant was the low GOHAI index with the female sex, which presented a higher percentage than that of the male sex (Table 4).

Figure 1 showed the mean GOHAI value and the absolute number according to educational level, showing that the majority of those with self-perception classified as low had up to complete high school education. Figure 2 presented the mean GOHAI value with regard to family income, demonstrating that the low GOHAI index was found in higher number among those with an income that ranged from 1 to 3 minimum wages.

DISCUSSION

It is extremely important to know the socio-economic pattern of users of public services, in the planning of activities to be performed in the clinics of higher learning institutions, and it is also a determinant of the construction of the treatment plan to be proposed to each patient[12].

The majority of the patients who sought the service were women, corroborating findings in the literature that have also shown predominance of the female gender[13-18]. One of the limitations of this study was to achieve a sample that would present a parity of gender between the participants, since the majority were of the female gender. d'Avila et al.[13] (2010) justified this predominance of the female gender by the disposition of women in jobs with less strict working hours, and the fact that public services, in the majority of instances have day time hours of attendance, making it difficult for men to seeks the services.

Outpatient attendances in the clinics of dental schools are performed with fixed protocols, and frequently, the treatments are prolonged, so that patients who work full time desist from seeking this service due to the delay in concluding treatment.

Table 2. Relative Frequency of GOHAI Index responses

Items of GOHAI	Responses%		
	Always	Sometimes	Never
Limit the quantity of food	8.1	15.1	76.7
Problems with hard foods	19.8	30.2	50.0
Swallow comfortably	90.7	3.5	5.8
Teeth or dentures impede speaking	18.6	12.8	68.6
Eat without discomfort	38.4	46.5	15.1
Limit contact with persons	16.3	14.0	69.8
Happy with appearance of teeth	31.4	11.6	57.0
Use of medication to alleviate toothache	7.0	39.8	53.5
Need to take care of teeth	52.3	36.0	11.6
Feel nervous about dental problems	39.5	22.1	38.4
Uncomfortable to eat in front of other people	26.7	7.0	66.3
Sensitivity	52.8	20.0	26.7

Table 3. Classification of oral health perception and frequencies relative to GOHAI index

Classification of Perception	N	%
> 30 (Low)	67	77.9
From 31 to 33 (Moderate)	11	12.8
From 34 to 35 (High)	08	9.3
Total	86	100

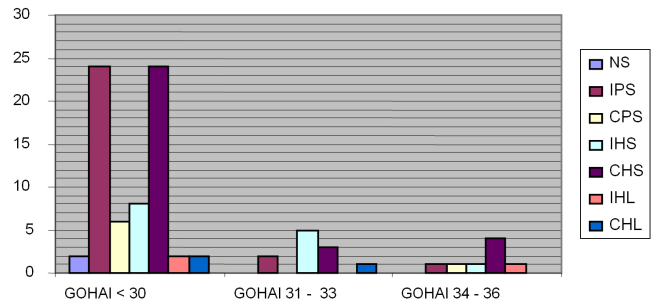

Figure 1. Educational level related to GOHAI index values.

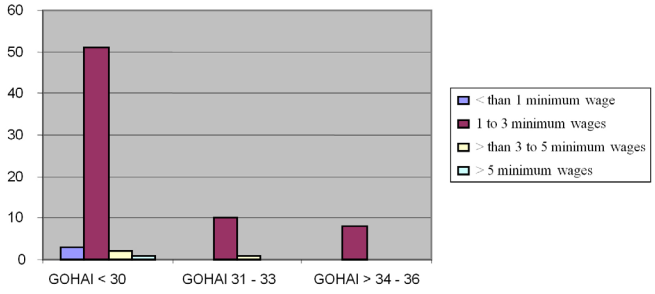

Figure 2. Family income related to GOHAI index values.

The literature confirms that the major portion of the demand for the services of the university dental clinics is by young patients[13-15]. Other studies analyzed[16-18] presented age-ranges with wide variation, which made comparison and classification difficult.

The number of marriages in 2003 returned to the level of 1993 – almost 750 thousand – after it had fallen to around 730 thousand in 2000. Moreover, in relation to 1993, the number of judicial separations and divorces rose by 17.8% and 44%, respectively[19]. In this study the majority of subjects declared they were married or lived within a stable partnership (69.8%), corroborating the data of some studies[14,17], however, diverging from the study[13], a fact that appears to be related to the sample size.

Low educational levels are associated with the worst oral health conditions in general, because it appears to affect preventive care and judgment about the significance of diseases; and persons with a higher educational level show a more careful behavior with regard to their teeth[20].

Of the total number of subjects researched 40.8% had primary schooling, similar to the data presented in the literature[14,16,18]. Studies have also shown that the majority of users were unemployed[13,14,18], differing from the study of Reis, Marcelo[2] (2006), indicating that the majority were working.

There is a close relationship between oral health conditions and social standards, even in countries showing a decline in the prevalence of dental caries. Oral health has an inverse relationship between the socio-economic level and populations of less favored social classes, which present worse oral health conditions and have less access to dental services[21].

This situation shows that the collective methods of dental caries prevention, such as fluoridation of public water supplies, in spite of being effective, are incapable of overcoming the inequalities

Table 4. Bivariate analysis of GOHAI index and independent variables

Variable	GOHAI								p-Value
	Low (<30)		Moderate (between 31 and 33)		High Between 34 and 36		Total		
	n	%	n	%	n	%	n	%	
Total Group	**67**	**47.4**	**11**	**52.6**	**8**	**100.0**		**100**	
Gender									
Male	14	58.3	5	20.8	5	20.8	24	100	$p^{(1)} = 0.014^*$
Female	53	85.5	6	9.7	3	4.8	62	100	
Marital Status									
Married/Stable Union	47	78.3	10	16.7	3	5.0	60	100	$p^{(1)} = 0.054$
Single/Widowed/Divorced	20	76.9	1	3.9	5	19.2	26	100	
Education									
No schooling	2	100	-	-	-	-	2	100	$p^{(1)} = 0.946$
Primary	26	78.5	4	11.8	4	11.8	34	100	
High school	33	75.0	7	15.9	4	9.1	44	100	
Higher learning	6	100	-	-	-	-	6	100	
Income									
> 1	10	71.4	1	7.1	3	21.4	14	100	$p^{(1)} = 0.199$
≤ 1 - 3	54	79.4	10	14.7	4	5.9	68	100	
< 3	3	75.0	-	-	1	25.0	4	100	
Works									
Yes	34	75.6	6	13.3	5	11.1	45	100	$p^{(1)} = 0.865$
No	33	80.5	5	12.2	3	7.3	41	100	
Government Program									
Yes	29	80.6	5	13.9	2	5.6	36	100	$p^{(1)} = 0.686$
No	38	76.0	6	12.0	6	12.0	50	100	
Housing									
Own	47	73.4	9	14.1	8	12.5	64	100	$p^{(1)} = 0.184$
Rented	20	90.9	2	9.1	-	-	22	100	

(*): Significant Association at 5.0%. (1): By means of Exact Fisher test.

of access to care and other preventive means, such as hygiene materials, suitable diet and other forms of prevention, since caries is a multifactorial disease. These inequalities affect access to health services, which in Brazil, are unsatisfactory in the public network, and for many, inaccessible in the private network. It is fair to conclude that there is a need for improvement in the quality of life of individuals, in order to change the condition of health[12].

A larger number of patients belonged to social classes with an income lower than 3 minimum wages, similar to studies present in the literature, in which the users received fewer than 5 minimum wages[13,14].

Of the interviewees, 41.9% depended on social programs, of which 69.4% were benefited by the "Programa Bolsa Família" (family assistance program), 22.2% on "Bolsa Escola" (school assistance) and 8.3% on "Fome Zero" (zero hunger). Nevertheless, 74.4% owned their homes. The North and Northeast regions have the highest percentages of home ownership[20]. A situation found in the study of d'Avila et al.[13] (2010), over half the users own their homes, in spite of the low educational level and low monthly income.

Self-esteem is an important variable in the rise in social level and oral health behavior[22]. Self-perception of health is a diagnostic

factor that shows the level of information of the patient with regard to knowledge of preventive measures, and in this sense it is emphasized that self-perception may be directly associated with education and the socio-economic situation of individuals, and must be observed as an object of subjective evaluating, needing to be complemented with a clinical evaluation[23].

The last survey of the oral health conditions of the Brazilian population – "Projeto SB Brasil"[24], portrays results with reference to self-perception of oral health, in which 37.1% of the patients from 34 to 44 years of age classified themselves as being satisfied. The same situation has been found in studies conducted in other countries[25,26].

The present study verified a low perception of oral health, by means of using the GOHAI Index, with a mean of 27.06, being in agreement with studies[27,28] that presented means close to this and classified as poor, being 26.8 and 29 respectively, thus perceiving the negative impact of oral health conditions on the daily lives of the users. One is reminded that these results must be compared with caution, considering that the study population of the first mentioned research consisted of elderly persons, and the second, of patients from the clinic of a school of dentistry.

The responses to the GOHAI Index revealed that 76.7% of the subjects had never limited the quantity of foods ingested; 90% swallow comfortably, and 50% had never had any problems with hard foods. On the other hand, 57% were not happy with the appearance of their teeth and 52.8% always feel the sensitivity of their teeth.

One emphasizes the importance of the teeth in the daily lives of persons, in which the problems caused by tooth losses are functional (eating, chewing and speaking) and social (behavioral changes, dissatisfaction with appearance, and compromised social acceptance)[29].

When relating the GOHAI mean to educational level and family income, one perceives that the majority of users had an educational level which could go up to the category of incomplete high school education and income of up to three minimum wages.

The relations between economic, social, cultural and educational factors determine behavioral patterns that does or does not generate health. This fact requires change in behavior of both users and health professionals, mainly as far as educational actions are concerned[12]. Not only is the offer of quality dental services an important factor for amplifying access by the population to services that resolve their problems, but also the perception of oral health needs by individuals, so that they do indeed seek these services[30].

CONCLUSION

The study sample was composed of women who had a low monthly income. The result of the GOHAI index was classified as low, and a negative impact of oral health conditions was verified on the daily lives of the users evaluated.

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CONFLICTS OF INTERESTS

The authors declare no conflicts of interest.

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