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| ORIGINAL

Dental self-perception and clinical dental description of participants in the Open University programme for elderly people

Autopercepção e características clínico-odontológicas dos participantes da Universidade aberta a terceira idade

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ABSTRACT

Objective: This study verified both the self-perception and oral characteristics of a group of elderly participants of the Open University for the Elderly (UNATI). Methods: The sample consisted of a cross-sectional epidemiological study with elderly subjects (50 years of age or older), who attended the UNATI-UNIFAL/MG program. Data collection was carried out using a semi-structured questionnaire consisting of open- and closed-ended questions regarding oral health, its interference with self-esteem and nutrition, among other features. In addition, an application form based on the proposals by the Oral Health Survey 2010, was used. Univariate and multivariate descriptive analyses were performed. Results: The study sample consisted of 106 subjects (mean age of 62.4 years), of whom 59.4% had attended a dental appointment in the last year for routine and/or aesthetic examinations (38.7%). The clinical conditions showed that only 19.8% of the subjects were completely edentulous, an average DMFT of 26.1, and 37.7% used some kind of complete upper dentures, complete lower dentures, or both. Regarding self-perception of oral conditions, 34.9% considered it a regular perception, however in the applied statistics the presence of pain demonstrated a worse perception which was not correlated with teeth loss, presence of dentures and/or restored teeth. Conclusion: The self-perception of oral conditions is regular and the clinical and odontological characteristics evaluated revealed partial edentulous subjects with high DMFT. By evaluating the odontological aspects, it was observed that the majority of the subjects did not have difficulties to look for a dentist, they attended dental appointments in the last year and the preventive treatment had been the most required.

Indexing terms: Elderly people's health. Oral health. Personal atisfaction. Self-perception.

RESUMO

Objetivo: Este estudo verificou a autopercepção, as características bucais e os aspectos odontológicos dos participantes da Universidade Aberta a Terceira Idade (UNATI). Métodos: Refere-se a um estudo epidemiológico transversal com indivíduos a partir de 50 anos de

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*idade que frequentam o programa UNATI-UNIFAL/MG. O instrumento de coleta de dados consistiu em um questionário semiestruturado, composto por perguntas referentes à saúde bucal, interferência da mesma na autoestima e alimentação, entre outros. Além disso, foi utilizada uma ficha clínica baseada nas propostas do Levantamento em Saúde Bucal 2010. Foram realizadas análises descritivas, uni e multivariadas. Resultados: A amostra foi composta por 106 indivíduos, com idade média de 62,4 anos, dentre os quais 59,4% visitaram o cirurgião-dentista no último ano para exames de rotina e/ou estética (38,7%). As condições clínicas evidenciaram que apenas 19,8% dos indivíduos eram desdentados totais, o CPOD médio de 26,1 e 37,7% usava algum tipo de prótese total superior, inferior ou ambas. Quanto a autopercepção das condições bucais, 34,9% se refere regular, contudo, na estatística aplicada a presença de dor determinou uma pior percepção e não esteve correlacionada com a perda de dentes, presença de próteses e/ou dentes restaurados. Conclusão: A autopercepção das condições bucais é regular e as características clínico-odontológicas avaliadas revelaram indivíduos desdentados parciais com elevado CPOD. Ao avaliar os aspectos odontológicos a maioria não apresentou dificuldades ao procurar o cirurgião-dentista, visitaram esse profissional no último ano e o tratamento mais procurado por eles foi o prev*entivo.

Termos de indexação: *Saúde do idoso. Saúde bucal. Satisfação pessoal. Autoimagem.*

INTRODUCTION

There have been great advances worldwide in the fields of science and health regarding elderly people's perspective of life and care. However, raising life expectancy alone is not enough, it is essential to provide the current and future generation of the elderly, conditions for a healthy life [1]. An important issue to be considered is the perception the elderly present of their own health, so that educational, preventive and curative activities can be planned and achieved [2]. Issues such as how the elderly perceive health, how they cope with the aging process and what they do in order to stay healthy can help in the planning of public policies which promote health. Active aging programs, encouraging healthier lifestyles and self-care awareness can contribute to a better quality of life for these groups [3].

In this sense, the Open University for the Elderly (UNATI) has been leading a multiprofessional team (Nurses, dentists, physiotherapists, nutritionists) interested in the improvement and well-being of both older people and middle-aged adults [4]. Besides that the program has sought to involve these individuals through new skill improvement, social-recreational participation and leisure activities, aiming to educate, rescue old dreams and ensure a healthy aging [5].

Based on the profile of UNATI participants whose behavior and attitude towards health provide them with the opportunity of a better life quality, the present study aimed at verifying the self-perception, oral clinical condition and odontological aspects of these individuals participating in the UNATI program at the Federal University of Alfenas in the State of Minas Gerais (UNIFAL-MG).

METHODS

The descriptive, epidemiological cross-sectional study was carried out in middle-aged adults of both sexes, participants of the various workshops provided by the UNIFAL / MG program UNATI.The sample was non -probability convenience and the inclusion criteria in the study were: to attend the UNATI / UNIFAL-MG workshops, to be at least 50 years old (the minimum age recommended by this program) and to be available for intra-oral exams.

After a satisfactory adequate pilot test, the selected individuals answered a semistructured questionnaire composed of open and closed questions [6] in the workshop environment of UNATI and afterwards they were scheduled for dental evaluation in the UNIFAL-MG clinics.

For the intra-oral examination, the Oral Health Survey proposal was adopted as criteria and methodology with the following variables [7]: dental caries, periodontal condition, edentulism, presence and need of dental prostheses. In addition, clinical examinations (under artificial light) were performed by a single examiner, who obtained a Kappa coefficient of 0.8 after calibration.

A questionnaire was applied asking about "self-perception of oral health" (considering the alternatives: very bad, bad, fair, good, great), sex, marital status, race, level of schooling, presence of systemic discomfort, use of medication for painful tooth and gum, difficulty to go to the dentist, time elapsed from the last dental appointment and reason for it, where the last consultation was performed, perceived need for dental treatment, behavior when someone took a photograph , oral discomfort present at that time, importance given to teeth and oral hygiene, difficulty in eating any specific food.

The dependent variables of this study were the "intraoral clinical examination", "self-perception of oral conditions", the act of "smiling or being serious at the moment of a photographic record" and the "type of food consumed"; the independent variables included age, sex, level of education, total edentulism, time elapsed since the last dental appointment, among others.

The statistical approach was based on descriptive analysis, relative frequency, Spearman correlation coefficient, chi-square test at 5% significance in order to verify the association between categorical variables and Principal Component Analysis (PCA) for a multivariate approach to self-perception of oral conditions. All variables were tabulated in the Epi Info software [8], later analyzed in SPSS [9] software and R [10] software for Principal Components Analysis [11] through the FactoMineR package [12].

The present study was approved by the Research Ethics Committee of the Federal University of Alfenas, UNIFAL - MG, through protocol no. 004/2011. And the participants signed the Term of Free and Informed Consent.

RESULTS

A sample consisted of 106 individuals selected by sex, age, race, schooling and marital status. The mean age was 62.4 years old (standard deviation of 7.22), the majority of whom were female (85.8%), married (55.7%), white (80.2%) with complete high school (36.8%) incomplete elementary to junior high schooling (32.1%).

The self-perception of the oral health conditions of the individuals attending the UNATI program was regular (34.9%) and good (32.1%). There was no statistically significant association between oral self-perception regarding sex (p= 0.455), marital status (p= 0.197), race (p = 0.688) and no correlation with education level (p= 0.849) and age (p= 0.512) (table 1).

Considering that 36.8% of the individuals reported having good or very good teeth, 34.9% regular and 20.8% bad or very bad, it was observed that responses indicated in the "field" referring to good or excelente oral health condition were also highlighted in a similar way when assessing dental health conditions, and this was highlighted by the presence of statistical correlation between these variables (r = 0.487, p <0.001).

Regarding general health, 34.0% of the individuals presented some systemic discomfort (respiratory, bone-muscular, circulatory, among others); 38.7% presented painful teeth and gums and 12.3% had to use medication for pain, (mainly painkillers -84.6%). According to the information collected, self-perception of oral conditions was not related to the presence of pain (p = 0.650), use of medication for discomfort (p = 0.782) and absence or presence of systemic impairment (p = 0.065).

The interviewees have reported difficult access to the dental service (39.6%), most of them due to the financial problems (24.5%). However, more than 50% had had their dental appointment in the last year and in private practices, for routine exams and/or aesthetic treatments (38.7%) (table 2). Concerning the attendance in the Dentistry Faculty clinics, Health Unit or in a private dental clinic, there was no statistically significant difference, related to theperception of oral conditions (p = 0.866).

Regarding the time of the last dental appointment, there was no correlation with the self-perception of oral conditions (p= 0.169) and self-perception of their teeth (p= 0.831). However, the individuals pointed out good and poor-dentist's performance. The results showed qualities related to skill in the relationship with the patient (49.1%), technical competence (41.8%) and moral values and / or cost (8.6%). The dentist's poor performance reported was: technical competence (54.8%), dentist-patient relationship skills (35.1%), moral values and / or cost (10.1%). For 84.0% of the interviewees, dental treatment for people over 50 years of age should be a specialized (25.5%), differentiated (35.8%) and humanistic (22.6%) treatment.

The clinical conditions of this study have shown 19.8% of total edentulous, an average DMFT of 26.1 and 62.2% of the individuals with some type of total prosthesis (upper, lower or both). A statistically significant correlation between DMFT and the time it took for the elderly patient to go to the dentist (p= 0.024) was highlighted, which demonstrates that the longer the delay in seeking this professional, the greater DMFT presented.

Among the research participants only 36 individualas aging from 65 to 74 years old were eligble for periodontal evaluation, of which 47.2% presented dental calculus, 52.7% had gingival bleeding to probe, 13.8% presented shallow periodontal pocket, and 72.2% insertion loss of 0 to 3 mm.

A complaint presented by individuals belonging to this program was the "need for treatment" (21.7%) due to the presence of teeth for extraction, restorations, replacement or placement of prosthesis, among others (table 2). The most discomfort reported under "other discomfort" (36.8%) items were: broken teeth, food retained between teeth, gingival bleeding, aesthetic discomfort, among others (table 2).

Table 1. Social characteristics of the elderly who attend the Open University at. Alfenas (MG), 2017.

Independent variables	Dependent varables					Total	r	p value
	Self-perception of oral conditions							
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)		
Sex	Very bad	bad	fair	good	Very good			
Female	9(9.9)	10(11.0)	34(37.4)	36(39.6)	2(2.2)	91(100.0)		0.455*
Male	0(0.0)	3(20.0)	8(53.3)	4(26.7)	0(0.0)	15(100.0)		
Age group(years)								
50 to 59	5(11.6)	4(9.3)	15(34.9)	19(44.2)	0(0,0)	43(100,0)		
60 to 69	4 (9.5)	5(11.9)	16(38.1)	15(35.7)	2(4.8)	42(100.0)	r= -0.064	p=0.512**
70 to 82	0(0.0)	4(19.0)	11(52.4)	6(28.6)	0(0.0)	21(100.0)		
Race								
White	7(8.2)	9(10.6)	35(41.2)	33(38.8)	1(1.2)	85(100.0)		
Black	0(0.0)	1(16.7)	3(50.0)	2(33.3)	0(0.0)	6(100.0)		0.688*
Dark-skin	2(13.3)	3(20.0)	4(26.7)	5(33.3)	1(6.7)	15(100.0)		
Schooling								
Junior High(not finished)	4(11.8)	3(8.8)	15(44.1)	11(32.4)	1(2.9)	34(100.0)		
Junior High (finished)	1(7.1)	1(7.1)	6(42.9)	6(42.9)	0(0.0)	14(100.0)	r= 0.019	p=0.849**
High school(not finished)	3(7.7)	7(17.9)	11(28.2)	18(46.2)	0(0.0)	39(100.0)		
High School (finished)	1(5.3)	2(10.5)	10(52.6)	5(26.3)	1(5.3)	19(100.0)		
Marital Status								
Married	5(85)	6(10.2)	29(49.2)	17(28.8)	2(3.4)	59(100.0)		
Single	1(3.8)	4(15.4)	7(26.9)	14(53.8)	0(0.0)	26(100.0)		0,197*
Widow(widower)	3(14.3)	3(14.3)	6(28.6)	9(42.9)	0(0.0)	21(100.0)		

Note: * Chi-square test; ** Spearman correlation coefficient.

All individuals with prosthetics (37.7%) considered it important for speech, esthetics and smile (14.1%), chewing and feeding (12.3%) or well-being (11.3%). Regarding dental treatment 50.0% considered the need for preventive treatments (cleaning and oral health education), 36.8% prosthetic (placement and/ or replacement of prostheses), among others (table 2). Statistically those who had reported pain were using some medication (p= 0.030), but did not precisely consider that they needed treatment due to pain (p= 0.244).

Regarding oral hygiene, all of them reported brushing their teeth or dentures daily. Most of them reported doing this practice three times a day (50.0%), while 70.7% used dental floss, daily. When asked about the reason for brushing teeth, 34.9% answered to keep clean, 30.2% because they have the habit, 22.6% to avoid diseases and 12.3% because it is a healthy behavior. Concerning the use of dental floss, it was reported as a toothbrushing complementation (30.2%); because the habit was acquired (40.6%) and those who did not use dental floss stated that the reason was because they used prosthesis (12.3%) or disliked flossing (17.0%).

The study observed the influence of oral and dental conditions on aesthetics and / or self-esteem and the research participants were asked about the behavior they would have if someone wanted to photograph them. It was shown that the behavior was related to the teeth and / or prostheses (49.0%), since they thought the smile was beautiful and they liked the teeth (24.5%) or they did not like to take a picture once they were not comfortable about what they considered negative details of their teeth such as color, shape, position and absence of them

Table 2. Dental aspects of the elderly who attend th Open University at Alfenas. Alfenas (MG), 2017.

Dental care		**Dental treatment**		**Self-perception**	
Is there anything that prevents you from going to the dentist?	**n (%)**	**Do you need dental treatment?**	**n (%)**	**Oral health conditions**	**n (%)**
No	64 (60.4)	Yes	99 (93.4)	Very good	2(1.9)
Yes	42 (39.6)	No	7 (6.6)	Good	40 (37.7)
What kind of impairment do you have?	**n (%)**	**Which treatment?**	**n (%)**	Fair	42 (39.6)
Financial	26 (24.5)	Preventive	53 (50)	Bad	13(12.3)
Fear and/or frustration	13 (12.2)	Prosthetic	39 (36.8)	Very bad	9(8.5)
Lack of time/company	10 (9.4)	Restorative and/or endodontics	31 (29.2)	**Reason of perception**	n (%)
When did you last visit the dentist?	**n (%)**	Periodontal	25 (24.5)	Needs treatment	55 (51.9)
Last year	63 (59.4)	Others	2 (1.9)	No pain/complain	26 (24.5)
Between 1 and 2 years	22 (20.8)			Takes care of oral health	17 (16.0)
Between 2 and 5 years	15 (14.2)	What bothers you the most?	n (%)	Feels pain/complains	8 (7.5)
More than 5 years	6 (5.7)	Other discomfort	39 (36.8)	Dental conditions	n (%)
Why did you go to the dentist the last time?	**n (%)**	**Need treatment**	23 (21.7)	**Very good**	5 (4.7)
Routine and / or aesthetic examination	41 (38.7)	Problems with the prosthesis	21 (19.8)	Good	34 (32.1)
Restoration,caries and/or canal	34 (32.1)	No discomfort	12 (11.3)	Fair	37 (34.9)
Prothesis and/or implant	31 (29.3)	Masticory discomfort and teeth loss	11 (10.4)	Bad	16 (15.1)
Problema de gengiva	10 (9.4)			Very bad	6 (5.7)
Pain and/or DTM	8 (7.5%)				

(24.5%). Other types of behavior were related to their personality and the way they faced the situation of having a picture taken (45.3%) but 5.7% stated that there was no real reason.

At the moment of the picture taking, for 48.1% of the individuals the important thing was to be smiling, the other part 48.1% reported the importance to be serious and to 3.8% it did not make any difference. Statically there was no association of this behavior with DMFT (p= 0.052), total edentulismo (p= 0,853), rehabilitation with complete prothesis (p=0,054), sex (p=0,077), oral percpetion (p=0,350) and dental perception (p = 0,347), at the time of photographic registration.

The consumed food descriptive analysis have suggested that the majority usually eat without problems (43.4%) and when they do not eat it is due to the oral condition (36.8%). In addition, 37.7% of the interviewees had difficulties in eating the type of foods listed, due to the consistency variation. Table 3 represents the kind of food investigated.

The Principal Component Analysis (figure 1) has shown that several vectors were present, each representing a

Table 3. Food consumed by the elderly interviewed. Alfenas (MG), 2017.

Food	**Consumption**	
	Yes	**No**
	n (%)	n (%)
Rice and beans	99 (9.4)	7(6.6)
Green raw salad	99 (93.4)	7(6.6)
Consume orange	96 (90.6)	10 (9.4)
Sweets	94 (88.7)	12 (11.3)
Dry bread	89 (84.0)	17 (16.0)
Ice-cream	89 (84.0)	17 (16.0)
Beef in pieces	87 (82.1)	19 (17.9)
Toast	85 (80.2)	21 (19.8)
Corn on the cob	82 (77.4)	24 (22.6)
Whole unpeeled apple	76 (71.7)	30 (28.3)
Pork crackling	65 (61.3)	41 (38.7)

variable measured in the study (food, clinical characteristics and self-perception of oral conditions). Figure 1 emphasizes that the proximity between the vectors is the indicator of correlated variables. On the other hand the opposing vectors represent the inversely proportional variables and the vectors that present a 90° angle between them suggest independent variables. Therefore, it is possible to state that people who consume less consistent types of food are those who have shown the best self-perception of oral conditions (proximity of vectors 1, 2, 3, 4, 6 and SPOC) (figure 1). However, self-perception is less correlated with more consistent food such as pork crackling, toast, apple (figure 1).

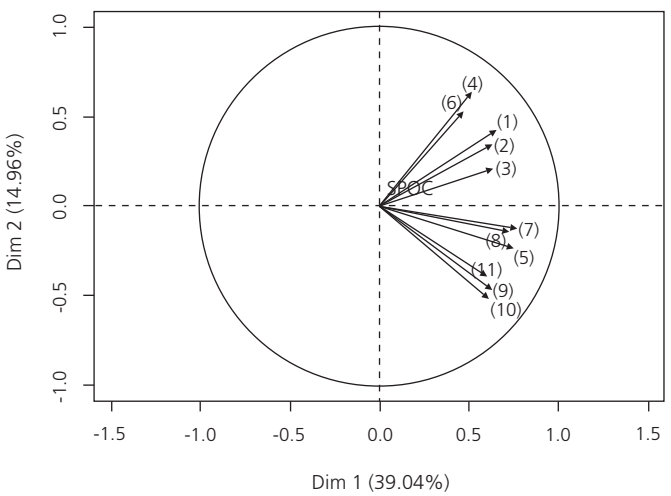

Figure 1. Scores relating self-perception and food. (1): Rice and beans; (2): Raw vegetable salad; (3): Consume orange; (4): Sweets; (5): Dry bread; (6): Ice cream; (7): Meat in pieces; (8): Toast; (9): Corn on the cob; (10) Whole unpeeled apple; (11): Pork crackling

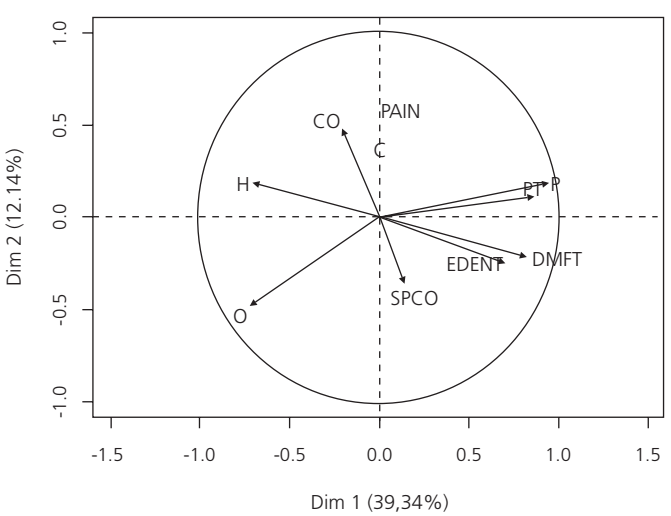

Figure 2. Scores relating self-perception and clinical conditions. DMFT: Average oral condition in relation to decayed, lost, filled teeth; H: Healthy tooth; O: Restored tooth; CO: tooth restored and with caries; C: tooth with caries; P: lost tooth; PT: complete dental prosthesis; EDENT: presence of total edentulism; SPOC: Self-perception of oral conditions.

Figure 2 shows that the presence of decayed teeth (C), restored teeth with caries (CO) and the presence of pain have determined a worse perception of oral conditions (vectors on opposite sides to SPOC).

However, it is necessary to visualize that the self-perception of the oral conditions was not correlated with the loss of teeth, presence of prostheses and/ or teeth restored, since the position of the vectors was close to 90° (figure 2).

DISCUSSION

Due to the population life expectancy increase, life quality of becomes of crucial importanc and its lack of commitment can negatively affect nutrition, physical and mental well-being and impair the pleasure of an active life social [13]. Participation in programs for the elderly such as UNATI is of utmost importance for good results on the self-perception of better oral conditions. According to the author, the general quality of life of the individuals participating has improved since the collective environment favors socialization, self-esteem and health care [14].

The present study has demonstrated a predominance of regular self-perception both for middle-aged and older adults and for older individuals in UNATI, different from that found in other studies [7,15-18]. Morever the association of oral condition self-perception with age, sex, race, schooling and marital status did not show statistical relationship and the results are similar to those found in the literature [6].

There is, however, a predominance of the married female population with high school education, similar to that found in the UNATI of the city of São José dos Campos, State of São Paulo although the same authors have found a predominance of good self-perception (44.75%), differing from that found in this study [19].

The self-perception of the interviewees was not consistent with the oral clinical conditions. The same has already been pointed out [6,20], observing that even in an unfavorable clinical condition, the elderly positively perceive their oral condition. Some authors [13,20] have highlighted

that the use of a self-perception instrument favors the dentist's performance, once by better understanding the patient's wishes about his / her own health, the professional can achieve the desired clinical situation.

However, some issues may prevent the dentist from satisfactorily achieving the best treatment for these individuals. In this study, the financial condition was considered an impairment in accessing dental care, nonetheless the cost of treatment was the least indicated by these individuals when qualifying the dentist. The cost may not be the main impairment to the use of the dental service and the low expectation of the elderly regarding their oral health represents an important issue to the use of dental services and it seems to contribute to the lower proportion of elderly people who feel the need for dental appointments [6]. According to data found in the literature [7,16] the demand of the elderly for dental treatment occurs during 2 and 5 years, however this was not observed with the participants of the UNATI, since most of them had had a dental appointment in the last year (59.4%).

Concerning the place where the last dental visit was carried out, the majority of the individuals investigated had sought the private practices, similar to the the data found by the last National Survey of Oral Health in Brazil [7], however different from what was found by another study [16].

Regarding the reason for the last dental appointment, 38.7% of the individuals reported having sought the service for routine and aesthetic exams, which is similar to the results in a population in the Family Health Units of João Pessoa-State of Paraíba, Brazil [18]. On this subject, some authors [18] have stated that the elderly seek prosthetic care and others [7,15], others have reported that the demand was for dental extractions.

The National Oral Health survey [7] with elderly people aged 65 to 74 years has shown that the DMFT was 27.5, however, in the present study and for this same age group, a DMFT of 25.2 was obtained. It is noteworthy that in individuals attending the elderly and health centers [21] there is a variation of DMFT between 26.8 and 31.1, and DMFT among institutionalized elderly persons [22] may reach 31.5.

When food selection [23] is concerned, 69.0% of elderly people have shown consistent food preference however most of them (55.2%) feel unable to consume type of foods such as: meat (44.8%), salads and raw vegetables (25.9%) and fruits (19%). In a study with an elderly population of 60 years old [24], it was identified that food may influence the chewing process, since 46.7% of these individuals have felt unable to chew some type of food, including meat (53.3%), fruits and raw vegetables (46.7%) and cereals (40.0%). However, for the participants of the UNATI, the type of food which have generated the most difficulties were pork crackling (38.7%), whole unpeeled apple (28.3%) and corn in the cob (22.6%). The statistical analysis suggested that when not able to ingest such kinds of food the patient reported frustation with his or her oral condition.

Another study [6] has demonstrated that when asking the elderly about the consumption of the same type of foods pointed out in this research, it was found that only 28.8% can chew all kinds of food. The authors have demonstrated that although many elderly people present masticatory problems, it is noticed that for the most of them f them chewing does not matter, once compensatory mechanisms to which they adapt are created.

It is known, however that the number of teeth plays a significant role on individuals' chewing abilities and that dental prostheses, when well adapted, can improve their masticatory pattern [24]. In general, the difficulty of the elderly in chewing is related to the changes resulting from structural alterations, morphological and biochemical characteristics although the research has shown that the masticatory deficiencies have not impaired or limited their social life [6].

CONCLUSION

The present study has demonstrated the presence of a regular self-perception of the oral conditions in the participants of the UNATI program and, in regard to clinical and odontological characteristics, the population studied has presented a high DMFT, significant dental calculus and the predominance of partial edentulism.

The results highlighted by the odontological aspects have shown the the sample studied as unique and differentiated since for a large number of the participants it was easy to look for a dentist, they had attended a dental appointment in the last year and have stated that preventive dental care was their greatest need.

Collaborators

GE MOREIRA analyzing, interpreting data and writing the article.LF Silva: Study planning, data collection and analysis of results. MR OLIVEIRA, study planning, data collection and analysis of results. LSR MAIA, study planning, data collection and analysis of results. LAR FERNANDES, analysis, data interpretation and critical review. DC LIMA, study design and planning, analysis, data interpretation and critical review.

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