

Relationship between the perception of dental care and Oral Health conditions in hypertensive and diabetic patients

Eduardo José Pereira Oliveira ¹
Denismar Alves Nogueira ²
Alessandro Aparecido Pereira ³

Abstract *The aim of this study was to evaluate the relationship between the perception of dental care services and oral health conditions in a hypertensive and diabetic population subscribed to the Family Health Strategy in the city of Alfenas, Minas Gerais, Brazil. This was a domiciliary, descriptive-analytical study with random and stratified sample, consisting of 186 individuals. The following indexes were applied: Decayed, Missing and Filled Teeth (DMFT); Filled and Sound Teeth (FS-T); Dental Care Index (DCI); Evaluation of the use and need of dentures; Oral health for primary care assessment questionnaire (OHPCA). A predominance of women (67.74%), hypertensive non-diabetic people (58.60%) and elderly people (52.69%), with an average age of 64.26 (\pm 12.22) years, was observed. We noticed a total DMFT of 27.00 (\pm 6.24); FS-T = 8.94 (\pm 10.28); DCI = 19.42 (\pm 26.80); 39.78% of partial dentures usage, 56.45% of total prosthesis usage with necessity of 36.02% of partial dentures and 28.49% of total prosthesis. In the OHPCA questionnaire, positive assessments of services were prevalent. Oral Health proved to be best among those individuals who reported good relationship with their dentists and worse among those individuals who considered as good the equipment used in the services. The critical aspects were: access, speed and professional-patient communication.*

Key words *Health evaluation, Dental health services, Oral health*

¹ Programa de Pós-Graduação em Ciências Odontológicas, Universidade Federal de Alfenas (Unifal). R. Gabriel Monteiro da Silva 700, Centro. 37130-001 Alfenas MG Brasil. eduardo.oliveira@oi.com.br

² Instituto de Ciências Exatas, Unifal. Alfenas MG Brasil.

³ Departamento de Clínica e Cirurgia, Unifal. Alfenas MG Brasil.

Introduction

According to Donabedian, 'health services evaluation' consists of a systematic and objective process that seeks to analyze the effectiveness or impact of a particular activity, from predetermined objectives, with a view to reorientation towards achievement of benefits¹. The user's standpoint, as the main character in this process, becomes important. The expression of their unique experiences when subjected to care allows a more appropriate analysis of the characteristics and quality of the offered services^{2,3}. In addition, the expression of their point of view reaffirms individual rights and citizenship, contributing to the empowerment and expressing a political and social dimension⁴.

There are several instruments that aim to evaluate health services, adding views of different stakeholders (managers, healthcare professionals and users), under several perspectives - ranging from structuring the service to the level of users' satisfaction^{5,6}. In Brazil, for the assessment of dental care services, an incipient consolidation of instruments developed or adapted to local realities, such as the QAQOHS (Questionnaire to Assess the Quality of Oral Health Services)⁷, the PCA *tool* - Brazil OH (Brazil Primary Care Assessment Tool, adapted for Oral Health)⁵ and OHPCA-user (Oral Health Assessment for Primary Care user version)⁸.

Despite the perception and satisfaction relate to the same subject, it is necessary to establish the difference between them. The perception expresses a personal judgment about an item in the agenda⁹. Satisfaction, however, can only be verified when a need coexists with the previous one. Thus, users are able to evaluate a service when, at some point, they demand for it¹⁰. Knowledge about users' satisfaction, concerns and needs of the services attached to the identification of the determinants of these perceptions can show important tools to practical feedback and assistance models. On the other hand, it is important to consider that the users' level of satisfaction can be high even in case of low performance of the services¹¹.

However, the incorporation of descriptive variables of Clinical Conditions of Oral Health (CCOH) to the investigation of users' perceptions on dental services shows itself very timely, because they reflect the object and goal of the services, and, to a greater or lesser degree, it measures the effectiveness of actions and programs.

With the course of demographic and epidemiological transitions, the significant increase in

Chronic Non-Communicable Diseases (CNCD) has generated the need for specific public policies to serve new demands^{12,13}. In this context, we highlight the Systemic Arterial Hypertension (SAH) patients and Diabetes *s Mellitus* (DM) patients, as well as the proven bidirectional relationship between oral health and systemic health in these frames¹⁴⁻¹⁶.

SAH and DM predominantly affect adults and elderly people. And in these life cycles it is more common to observe consequences from dental decays (edentulism and use/need of prosthesis) than its activity. In general, higher prevalence of dental decays among children and adolescents is observed, and its incidence is reduced in adulthood, when greater severity periodontal alterations (gingivitis and bone destruction) arise, leading to dental loss¹⁷. Thus, investigations that incorporate measures of extension of dental decays and their consequences - for example: the sum of decayed, missing and filled teeth (DMFT)¹⁸ are relevant, as well as information about the presence of functional predictably dentition - the index of Functional Teeth (FS-T)¹⁹; dimensions that characterize the dental services orientation - as proposed in the Dental Care index (DCI)²⁰; and measures on products of services (use/need of dentures)²¹.

This way, the present study aimed to assess the relationship between perception of dental services and clinical conditions of oral health in a population of adults and elderly hypertensive and diabetic people.

Methodology

This work is integrated to a descriptive-analytic, epidemiological cross-sectional household research in which we evaluated, in addition to the perception of the users about the dental services and CCOH, the quality of life related to these variables between adults and elderly hypertensive and diabetic patients linked to the family health strategy (FHS) in Alfenas, South of the State of Minas Gerais, Brazil. This city is located at 342 km distant from the capital, Belo Horizonte, and its estimated population in 2014 was 78,176. The study was approved by the Committee of Ethics in Research with Human Beings at the Federal University of Alfenas (opinion number 795,485) and City Health Secretary of Alfenas/MG.

We initially established a minimum sample size from pertinent criteria to consider oral health surveys, adopting it to calculate a formula for fi-

nite populations proposed by Silva²². As a reference, we considered the DMFT registered at the national oral health survey SB BRAZIL 2010²³ to individuals in ages 35-44 and 65-74 years, living in countryside cities in the southeastern region of Brazil. A 95%-confidence level was adopted to this study, with 10% of error, appeal deff (design effect) (in which the value initially retrieved is doubled), and with a non-response rate of 20%, reaching the minimum final sample of 216 people to the research of the CCOH. However, for it is a domiciliary study, in which the active search is the only tool for collecting and considering the possibilities of rejection and difficulties on the location of potential participants, we agreed to organize a record with twice as many eligible individuals.

In order to select the participants, we initially determined that five among the 15 FHS people in the urban area of the city should compose the sample, drawing them. As a result, a survey of individuals registered in the HIPERDIA system/SUS (Registration and monitoring system of hypertensive and diabetic patients of the unified health system) in the elected FHS for this research came to a total of 2629 individuals registered. For the selection of potential participants, we made numbered the individuals in a worksheet, by listing them according to their FSH, in a sequence of micro areas, streets and increasing numbers of households. The draw has systematized the sample through a regular interval obtained by dividing the total population (2,629) by the folded sample – concerning the registration of reserve pool individuals (432), obtaining a range equal to 6.1. The first individual was drawn by a table of random numbers from 1 to 6. Being number 6 the chosen, the first was the sixth member of the list. From this standard, to each drawn individual we added the range of 6.1, and the rounding needed to get to a full number. In this way, each stratum (FHS) was automatically composed in proportion to the 432 individuals listed (reserve pool).

To be included in the sample, the individual should be the bearer of SAH and/or DM; be more than 35 years; be linked to one of the FHS selected and have been subjected to, at least, two queries with any Oral Health Team (OHT). As OHT, we considered any arrangements between professionals involving a dentist providing dental services. Thus, three categories of services were established: OHT as member of FHS; Clinics of Education from two Universities in the city – a public and a private ones; Private offices/clinics.

We considered as “elderly” those individuals who were more than 65 years, according to the World Health Organization recommendations for oral health epidemiological surveys¹⁸.

In order to proceed to the evaluation of the individuals’ perceptions about the dental services, we used the OHPCA-user questionnaire⁸, auto fill mode, modified version. The instrument consists of five dimensions: Reception (questions 3, 6, 8, 9, 10, 17, 18); Quality of care (questions 4, 5, 7, 12, 14, 15, 19); Access (questions 1, 11, 20); Team (questions 13, 16); Organization (question 2). This instrument was chosen for having been previously developed with both adult and elderly populations within the FHS. However, to adapt to specificities of this investigation, some modifications were required. Considering the possibility of using dental services other than the services provided by FHS, we chose to suppress questions 13, 15, 16 and 19, for they deal with specific aspects of the FHS. The respondents were asked to replace the word “post” by “doctor’s Office” or “clinic”. And, finally, the original range at the time of application of the questionnaires remained. Nevertheless, during the data analysis, we came to the conclusion of excluding the “do not know” answers (Table 1).

CCOH were investigated through DMFT indices (according to the codes and criteria recommended by WHO)¹⁸; FS-T (sum of healthy and restored teeth - it verifies the number of predicted functional teeth in the oral cavity, considering that the closer to 32 the index is, the greater the number of functional teeth will be)¹⁹; and DCI (ratio between the number of restored teeth and the sum of decayed, lost and restored, multiplied by 100 - it expresses the capacity of the Department to meet the needs of restorative treatment)²⁰. The use and need of dentures by mode (partial dentures and total) were also evaluated, according to the codes and criteria adopted in SB BRAZIL 2010²¹. The assessments were conducted in the individuals’ houses under natural light, with the aid of a *ballpoint* probe (WHO) and flat mouth mirror, the participants being in supine position and with the examiner positioned at 12 hours¹⁸.

Data were collected by a trained and calibrated examiner. The training and the calibration of the examiner were done in two FHS with people who were not part of the the final sample. A total of 36 volunteers (16 on training and 20 on calibration) took part in this step. Taking as reference a standard Examiner (*Gold Standard*), we determined kappa inter-examiner statistic to DMFT (kappa = 0.91) beyond the need and use

Chart 1. OHPCA-user questionnaire from Sanchez⁸.

1	It's easy to get dental treatment in the health center where I attend.	Yes / sometimes	No / never	I do not know
2	In order to consult with the dentist who meets me in the health center, I have to stop working during a period of the day	Yes / sometimes	No / never	I do not know
3	Talking to the dentist, who meets me at the health center, whenever I need is easy.	Yes / sometimes	No / never	I do not know
4	The dentist who meets me at the health center does more for me than I need.	Yes / sometimes	No / never	I do not know
5	I recommend to others the clinic where I get dental treatment.	Yes / sometimes	No / never	I do not know
6	The dentist who meets me at the health center listens to me carefully.	Yes / sometimes	No / never	I do not know
7	I quite understand what the dentist from the health center explains.	Yes / sometimes	No / never	I do not know
8	The dentist who meets me at the health center knows me well.	Yes / sometimes	No / never	I do not know
9	The dentist who meets me at the health center and I have a good relationship.	Yes / sometimes	No / never	I do not know
10	The dentist who meets me at the health center cares about my health.	Yes / sometimes	No / never	I do not know
11	In the health center which I attend, I am asked to return for query with the dentist who meets me.	Yes / sometimes	No / never	I do not know
12	I have confidence in the work of the dentist who meets me at the health center.	Yes / sometimes	No / never	I do not know
13*	When other health professionals help the dentist who meets me at the health center, the outcome of treatment is better.	Yes / sometimes	No / never	I do not know
14	The quality of the work of the dentist who meets me at the health center is good.	Yes / sometimes	No / never	I do not know
15*	My oral health needs are solved in the same quality as the treatment provided by a private dentist.	Yes / sometimes	No / never	I do not know
16*	The community health agents play an important role with their work for the community.	Yes / sometimes	No / never	I do not know
17	In general, the health center where I am served is clean and organized.	Yes / sometimes	No / never	I do not know
18	The equipments which are used are good and work well.	Yes / sometimes	No / never	I do not know
19*	The dentist who meets me at the health center does a good job, regardless of the political system.	Yes / sometimes	No / never	I do not know
20	The treatment with the dentist who meets me at the health center is fast.	Yes / sometimes	No / never	I do not know

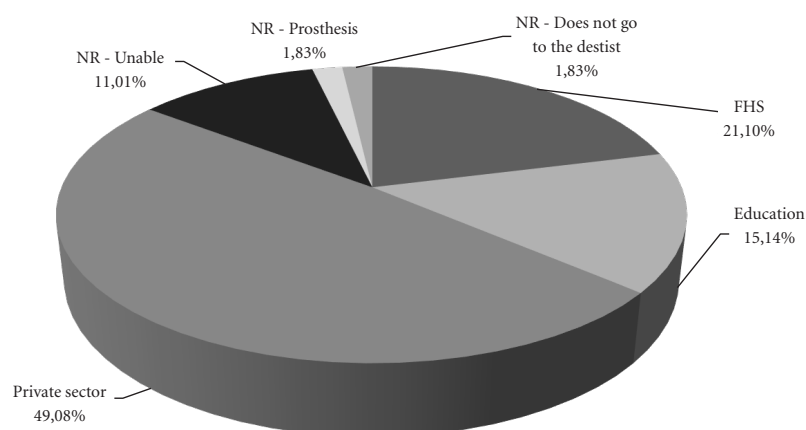
* Questões excluídas por referirem-se à aspectos específicos da ESF.

of prostheses ($\kappa = 1.00$). In order to proceed to tabulation and data analysis, statistical package *SPSS*[®] was adopted with a significance level of 5% ($\alpha < 0.05$). Considering the non-normality on the distribution of the data verified by the Kolmogorov-Smirnov test ($p < 0.05$), non-parametric tests were used. We chose to apply the Mann-Whitney U Test for comparison of averages and the Chi-square test (for frequencies which are larger than five) or Fisher exact (for expected frequencies to be less than five) so that we could compare the obtained proportions.

Results

A total of 218 people subscribed to the survey, so we could reach the minimum sample composition (216). However, the following did not respond to OHPCA-user: twenty-four citizens who did not either read or write, or who presented some cognitive difficulty; four citizens that they had made their prostheses with the prosthetic professional and four citizens who affirmed to not had been to the dentist at least in last the ten years. Except for these individuals, we obtained a total final sample of 186 respondents (Graphic 1).

In Table 1, we present data from the distribution of the sample by gender, cycle of life, systemi-



Graphic 1. Sample distribution among respondents (according to the use of dental services) and non-respondents. Alfenas, MG, Brazil, 2016 (n = 218).

Legend: NR = not replied to OHPCA-user; Unable = unable to respond to the questionnaire for not reading and writing or presenting any cognitive difficulties.

Table 1. Sample distribution according to gender, life cycle, systemic condition, clinical conditions and oral health awareness about dental services (OHPCA-user) among adults and elderly people. Alfenas, MG, Brazil, 2016 (n = 186).

Gender, n, %	Male	60	32,26													
	Female	126	67,74													
Life cycle n, %	Adults	88	47,31													
	Elderly people	98	52,69													
Systemic condition n,%	SAH	109	58,60													
	DM	22	11,83													
	SAH + DM	55	29,57													
Dental condition, μ (dp)	DMFT	27,00	(6.24)													
	FS-T	8,94	(10.28)													
	DCI %	19,42	(26.80)													
	Missing Teeth	22,58	(10.57)													
Use/need of prosthesis n,%	Does not use PD	112	60,22													
	Uses PD	74	39,78													
	Does not use CD	81	43,55													
	Uses CD	105	56,45													
	Requires no PD	119	63,98													
	Needs PD	67	36,02													
	Requires no CD	133	71,51													
	Needs CD	53	28,49													
OHPCA-user %																
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q14	Q17	Q18	Q20
nR	184	186	186	180	181	184	183	181	184	175	184	181	180	181	174	182
No	6,52	76,35	5,91	14,44	16,58	3,26	7,65	45,30	1,63	16,57	25,00	4,97	8,89	3,32	4,02	21,43
Yes	93,48	23,65	94,09	85,56	83,42	96,74	92,35	54,70	98,37	83,43	75,00	95,03	91,11	96,68	95,98	78,57
Total n, %															186	100,00

Legend: μ = average; (sd) = standard deviation; SAH = Systemic Arterial Hypertension; DM = Diabetes Mellitus; FS-T = index of Functional Teeth; DCI = index of dental care; PD = Partial Denture; CD = Complete Denture; Qn = N question; nR = number of respondents for each question of the OHPCA-user.

cal condition, as well as the characterization of the CCOH and the Perception of the Services (OHP-CA-user). A predominance of women (67.74%), hypertensive non-diabetic people (58.60%) and elderly people (52.69%), with an average age of 64.26 (\pm 12.22) years, was observed. The average age between the 186 respondents was of 64.26 (\pm 12.22), varying between 35 and 93 years old. We noticed a total DMFT of 27.00 (\pm 6.24); FS-T = 8.94 (\pm 10.28); DCI = 19.42 (\pm 26.80); 39.78% of partial dentures usage, 56.45% of total prosthesis usage with necessity of 36.02% of partial dentures and 28.49% of total prosthesis. In the OHP-CA questionnaire, positive assessments of services were prevalent.

Chart 2 and Table 2 show the relationship between the perception of Dental services and the

CCOH in the studied population. Oral Health proved to be best among those individuals who reported good relationship with their dentists and worse among those individuals who considered as good the equipment used in the services. The critical aspects were: access, speed and professional-patient communication.

Discussion

Even with high edentulism, being submitted to a conservative care and still demanding for prostheses, the study population generally welcomed the dental services. The CCOH (DMFT, FS-T, DCI, number of missing teeth) are better among users who think that the dentist knows them well

Chart 2. Summary of significant dependency relation of variables concerning the perception of respondents about dental services. Alfenas, MG, Brazil, 2016.

Q1 It's easy to get dental treatment in the health center where I attend.	-96.23% of Private Service users, 95.56% of FHS and 81.82% of Clinics of Education clients believe to be easy to get dental treatment ($\rho = 0.011$). -Among the individuals who do not require CD, 96.30% find it easy to get treatment. Among those who require CD, this percentage is 86.79% ($\rho = 0.016$).
Q3. Talking to the dentist, who meets me at the health center, whenever I need is easy.	-96.32% of the individuals that do not require CD find it easy to talk to the dentist. Among those who require CD, 88.89% share that vision ($\rho = 0.048$).
Q7. I quite understand what the dentist from the health center explains.	-At Clinics of Education, 100% of users believe they understand well what the dentist explains. In the private service this percentage is 93.27% and in FHS 84.78% have the same opinion ($\rho = 0.037$).
Q8. The dentist who meets me at the health center knows me well.	-60.58% of Private Service users, 55.56% of FHS and 34.38% of those who attend the Clinics of Education consider the dentists know them well ($\rho = 0.033$). - People who think that the dentist knows them well feature: less DMFT (26.24 x 28.54; $\rho = 0.005$) and larger FS-T (10.84 x 5.84; $\rho = 0.001$); bigger DCI (24.59 x 11.39; $\rho = 0.001$) and lower number of missing teeth (20.57 x 25.82; $\rho = 0.001$) when compared to those who think that the dentist did not know them well. -72.73% of the people who do not use CD and 43.52% of those people who use CD consider that the dentists know them well ($\rho < 0.001$). -60.61% of the individuals that do not require CD and 43.40% of CD and among those who require CD think the dentists know them well ($\rho = 0.033$).
Q10. The dentist who meets me at the health center cares about my health.	-86.82% of the people that do not require CD and 74.00% of the ones who require it think dentists care about their health ($\rho = 0.039$).
Q18. The equipments which are used are good and work well.	-Those who believe that the equipment used by the dentists are good or work well featured worst FS-T (8.12 x 17.00; $\rho = 0.020$) and DCI (17.41 x 44.32; $\rho = 0.026$) results and the highest number of missing teeth (23.45 x 14.75; $\rho = 0.022$) compared to those who consider that the equipments are not good and do not work well.
Q20. The treatment with the dentist who meets me at the health center is fast.	- 88.37% of the users from FHS, 84.91% of private sector users and 45.46% of the regular users of the Clinics of Education consider their dental treatments fast ($\rho < 0.001$).

Table 2. Relationship between the perception of dental services and clinical conditions of oral health in adults and elderly respondents. Alfenas, MG, Brazil, 2016 (n = 186).

	G	LC	SC	OS	DMF	FST	DCI	M	UPP	UCD	NPP	NCD
	ρ^Q	ρ^Q	ρ^Q	ρ^Q	ρ^M	ρ^M	ρ^M	ρ^M	ρ^Q	ρ^Q	ρ^Q	ρ^Q
Q1	0,165	0,849	0,360	0,011	0,779	0,734	0,733	0,726	0,260	0,888	0,385	0,016
Q2	0,059	0,368	0,637	0,328	0,387	0,818	0,852	0,845	0,399	0,485	0,150	0,569
Q3	0,725	0,924	0,399	0,685 ^F	0,703	0,598	0,743	0,560	0,800	0,639	0,521	0,048
Q4	0,714	0,996	0,948	0,302	0,978	0,832	0,697	0,758	0,491	0,588	0,305	0,486
Q5	0,466	0,820	0,726	0,427	0,337	0,398	0,730	0,472	0,872	0,762	0,362	0,280
Q6	1,000 ^F	1,000 ^F	0,483 ^F	0,853 ^F	0,209	0,247	0,395	0,261	1,000 ^F	0,238 ^F	1,000 ^F	0,357 ^F
Q7	0,803	0,384	0,804	0,037	0,277	0,305	0,709	0,199	0,861	0,259	0,993	0,551
Q8	0,465	0,694	0,417	0,033	0,005	0,001	0,001	0,001	0,087	<0,001	0,105	0,033
Q9	1,000 ^F	1,000 ^F	0,510 ^F	0,232 ^F	0,078	0,073	0,104	0,073	0,274	1,000 ^F	0,555	0,199 ^F
Q10	0,184	0,169	0,869	0,309	0,296	0,352	0,741	0,346	0,653	0,765	0,710	0,039
Q11	0,696	0,702	0,372	0,398	0,703	0,571	0,601	0,570	0,370	0,736	0,518	0,874
Q12	0,953	0,086 ^F	0,525	0,340	0,684	0,547	0,406	0,518	0,264	0,203	0,370	0,721
Q14	0,806	0,317	0,237	0,299	0,934	0,932	0,653	0,950	0,261	0,953	0,285	0,649
Q17	0,680 ^F	0,708 ^F	0,539 ^F	0,322 ^F	0,479	0,267	0,151	0,273	0,440	0,139	0,257	0,675 ^F
Q18	0,248	0,473 ^F	0,879 ^F	0,501 ^F	0,066	0,020	0,026	0,022	0,718 ^F	0,065 ^F	0,093	0,274
Q20	0,792	0,979	0,330	<0,001	0,895	0,730	0,253	0,715	0,626	0,427	0,817	0,812

Legend: G: Gemder; LC = Life cycle; CS = Systemic Condition; OS = type of Dental Service; FST = index of Functional Teeth; DCI = index of Dental Care; M = Missing Teeth; UPP = Use of Partial Prosthesis; UCD = Use of Complete Denture; NPP = Partial Prosthesis Need; NCD = Complete Denture Need; Qⁿ = Question n.

^Q ρ Value obtained using the Chi square test. ^F the Fisher exact test was applied when it was not possible to use the Chi square. ^F ρ Value obtained through the Mann-Whitney U Test.

In bold: significant statistic to ρ at < 0.05 .

and worse among those who think the equipment used in the services is good. The need for dentures is an obstacle in aspects such as access, communication and acquisition of professional relationship between adults and elderly hypertensive and diabetic people.

Despite public health policies prioritizes CNCND holders¹³ in health care, Oral health conditions similarly present precarious hypertensive and diabetic patients when they are compared to populations without these CNCND²⁴. Thus, the oral health services, being public or private, have not been able to provide a differentiated care to this population.

Oral health, use and perception on dental services

The sample of respondents was predominantly scored by women and elderly people, the most frequently found individuals in household surveys²³. Regarding systemical conditions, individuals with SAH prevail.

Although this research was carried out in areas assigned to FHS containing OHT, little more than a fifth of respondents voted for the FHS as their reference for dental treatments. Almost half

of respondents uses the private service. In this way, OHPCA-user questionnaire application, initially chosen precisely because it had been designed within the logic of the FHS, had to be rearranged to achieve the goals of this study. The removal of questions and even their change occurred so that the instrument could also evaluate the perception of the users in Clinics of Education and Private Service.

One fact is worth to be highlighted: two participants reported making their prosthesis directly with professionals who had finished High School only (Graphic 1), legally and technically not enabled to perform such activity. The illegal exercise of dentistry, in addition to offering health and social risks to the population, disfavoring it, mainly in technical, scientific and humanistic qualities, corroborates to the deregulation of a service sector which aims to produce health and well-being – unreachable attributes with non-qualified professionals²⁵. Two other participants have not been to dental treatments for, at least, ten years. Even residents of areas in which the right to oral health care is materialized, the lack of access to services, whether by choice or by barriers imposed by socio-cultural conditions, still affects substantial fractions of the pop-

ulation with the naturalization of dental loss^{26,27} and subsequent kidnapping of values such as dignity and citizenship.

In relation to CCOH, we notice high DMFT, low FS-T and DCI and worrying edentulism, which does not differ, however, from populations with similar characteristics^{23,28}. As a result of extensive dental loss, the use of prostheses, particularly total dentures, is also high, being the necessity of partial dentures considerable (Table 1). The adult and elderly population suffers the consequences of conditions they have experienced in an accumulative process of risks during the life cycle¹⁷, added, in a recent past, to the absence of public policies focused on the promotion and prevention and the presence of models of Attention focused on the market, the mutilation and prosthetist artificialism^{26,27}.

Although the poor-qualified CCOH - high edentulism and poor demand for prostheses, adults and elderly respondents positively evaluated the services, from which we could observe high frequencies of responses expressing satisfaction, except for question 8 (which refers to the relation/longitude of care), in which the opinions seem to be divided (Table 1). Concerning the users of Clinics of Education and the FHS, a possible apprehension of losing access to treatments would restrict their ability to pinpoint any gaps in services. Among Private Service users, however, the positive aspect of the evaluations should really point to a horizon of significant satisfaction.

Determinants of perception on dental services

The perception among the interviewed participants on Dental Services does not seem to have been influenced by Gender, Cycle of Life (Adult/Elderly) and Systemic Condition (SAH/DM) in none of the items evaluated by OHP-CA-user ($p > 0.05$) (Table 2).

However, when comparing the three different types of dental service care, some differences emerge. In general, it can be inferred that the users of the Clinics of Education are more satisfied with the communication established with the professionals than people who go to other services. On the other hand, those citizens tend more to consider the service as slow, with difficult access, due to the little relationship with the professional (the dentist does not know the users well). As it is a service, in which the main objective is that graduate students learn, such aspects are understandable. Notwithstanding, an

aspect which should not underscores is that, in certain specialties, these points are the only “free” (meaning public) access alternative. Thus, it is extremely important that oral health care contemplates the whole care at all levels, without being restricted to only the Primary Care²⁹.

To Private Service, a greater relationship between patient and dentist and easy access were attributed, which did not cause us any oddity. Hence, the portion of the population which can afford health services, either directly or through mutual arrangements, has general access to this kind of service in a different condition. In these cases, there is still a concern, from service providers, in extending and perpetuating links with customers³⁰.

On the other hand, in FHS the service was considered faster. However, features like access, link/longitude and communication still fall short. This is a concerning result, considering that these dimensions integrate the essential attributes of primary health care (PHC)²⁹. By not meeting these qualities in a public service, the individual in favorable socioeconomic condition goes to the private service. However, one has to consider that the differential access to services expresses a clear and legitimate social injustice.

In fact, the link/longitude – specifically evaluated by question 8 – relates not only to the type of service, but also to the CCOH. We noticed less number of missing teeth, greater number of functional teeth (FS-T) and more conservative care (DCI) in people who believed that the dentist know them well. An interesting parallel can be established by confronting these CCOH with an assessment of the service’s technological structure (question 18). People who consider as good and appropriate the equipment used by the dentist - on the contrary of what one might have initially imagined - show a higher number of missing teeth and lower number of functional teeth and DCI. Facing a higher-density technology, dental loss can be just one step to making prosthetics that may symbolize sophistication and technological advancement, as it might occur in the Private Sector. Such finding points to the necessity of consolidating the offer of services with humanized guidance, considering community as the interaction of biopsychosocial individuals, from the perspective of social determination³¹, once the biomedical model, based on a technicism, highlights serious failures and shortcomings in the health field.

The relation between perception of dental services and the use/need of dentures places the

complete denture as the symbol of separation of the user from his/her service (relation between question 8 and use/need of complete denture, Table 2). Reinforcing these findings, we notice that those individuals in need of dentures also think the access to services (question 1) is more difficult, besides being the people who most considered that the dentist did not know them well (question 8), nor cared about their health (question 10). Being the complete dentures the final stage of a cycle of pain, suffering and mutilation^{26,27}, the contact with the professional tends to decrease - occurring seasonally for maintenance or replacement of prostheses - or it even becomes extinct - when the person uses the same denture for more than ten years, for example (Graph 1). Thus, the gap between service and user becomes almost inevitable. This is also a reason which burdens the access to prostheses, usually being a critical node for the cost they represent, in either the public sector or the private sector.

Limitations of the study

We indicate as limitations of this study its cross section analysis, which does not allow causal inferences, besides the amendment of the

instrument (OHPCA-user) used to verify the perception of dental services in the studied sample. The suppression of four questions from the original questionnaire, aiming its adaptation to the individual's context (from various services of oral health beyond FHS), may have influenced in some degree in getting the results, requiring caution in the analysis of the data.

Conclusions

The evaluation of health services from the perspective of the user corroborates to the implementation of the popular participation in the Unified Health System. Therefore, we understand the centrality of this actor and promote the empowerment of individuals and groups, from the creation of a virtuous environment in which the evaluation process expresses the strengthening of action capacities, the creation of opportunities for reflection and learning⁴ - even concerning health care promotion.

In the studied population, oral health is better among people who inform good relationship with the dentist and worse among those individuals who consider good the equipment used in services.

Collaborations

The authors EJP Oliveira, DA Nogueira, AA Pereira worked in all stages of the article.

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