Andréa Maria Eleutério de Barros Lima Martins[I]

Raquel Conceição Ferreira[II]

Pedro Eleutério dos Santos-Neto[III]

Danilo Lima Carreiro[IV]

João Gabriel Silva Souza[V]

Efigênia Ferreira e Ferreira[II]

Users' dissatisfaction with dental care: a population-based household study

ABSTRACT

OBJECTIVE: To examine whether demographic, socioeconomic conditions, oral health subjectivity and characterization of dental care are associated with users' dissatisfaction with such are.

METHODS: Cross-sectional study of 781 people who required dental care in Montes Claros, MG, Southeastern Brazil, in 2012, a city with of medium-sized population situated in the North of Minas Gerais. Household interviews were conducted to assess the users' dissatisfaction with dental care (dependent variable), demographic, socioeconomic conditions, oral health subjectivity and characterization of dental care (independent variables). Sample calculation was used for the finite population, with estimates made for proportions of dissatisfaction in 50.0% of the population, a 5.0% error margin, a non-response rate of 5.0% and a 2.0% design effect. Logistic regression was used, and the odds ratio was calculated with a 5% significance level and 95% confidence intervals.

RESULTS: Of the interviewed individuals, 9.0% (7.9%, with correction for design effect) were dissatisfied with the care provided. These were associated with lower educational level; negative self-assessment of oral health; perception that the care provider was unable to give dental care; negative evaluation of the way the patient was treated, the cleanliness of the rooms, based on the examination rooms and the toilets, and the size of the waiting and examination rooms.

CONCLUSIONS: The rate of dissatisfaction with dental care was low. This dissatisfaction was associated with socioeconomic conditions, subjectivity of oral health, skill of the health professionals relating to the professional-patient relationship and facility infrastructure. Educational interventions are suggested that aim at improving the quality of care among professionals by responsible agencies as is improving the infrastructure of the care units.

DESCRIPTORS: Dental Care. Patient Satisfaction. Dental Health Services. Health Care Quality, Access, and Evaluation.

[I] Departamento de Odontologia. Faculdades Unidas do Norte de Minas. Universidade Estadual de Montes Claros. Montes Claros, MG, Brasil

[II] Departamento de Odontologia Social e Preventiva. Universidade Federal de Minas Gerais. Belo Horizonte, MG, Brasil

[III] Departamento de Fisiopatologia. Universidade Estadual de Montes Claros. Montes Claros, MG, Brasil

[IV] Instituto Federal de Educação, Ciência e Tecnologia do Norte de Minas. Campus Pirapora. Pirapora, MG, Brasil

[V] Departamento de Ciências Fisiológicas. Faculdade de Odontologia de Piracicaba. Universidade Estadual de Campinas. Piracicaba, SP, Brasil

Correspondence:
Andréa Maria Eleutério de Barros Lima Martin
Departamento de Odontologia
Campus Universitário Professor Darcy Ribeiro
Av. Rui Braga, s/n Vila Mauricéia
39401-089 Montes Claros, MG, Brasil
E-mail: martins.andreamebl@gmail.com

INTRODUCTION

Evaluation of health services by their users provides essential information for defining quality standards of the care delivered. This evaluation makes it possible to supplement technical evaluations with a vision shared by health service users based on their perception of the care they receive.[5] One of the factors considered in the evaluation of health care service quality is user satisfaction,[8] which has become an important tool for developing management strategies for the sector to meet the needs of the population appropriately.[13] The users' satisfaction level may have an influence on the demand for health care, which is one of the parameters used to analyze the results achieved by health services.[9,23]

This evaluation process includes satisfaction with dental health services, which is nationally evaluated in epidemiological surveys that investigate the population's oral health conditions (*Projeto SB Brasil*). Between 2002 and 2003, and in 2010, these kind of population-based studies were performed by the Brazilian Ministry of Health.[a,b] In the 2002 to 2003 survey, the service was evaluated as "good" at a frequency ranging from 60.2% and 65.6%, according to age group.[6] In 2010, satisfaction levels of over 56.4% were recorded, which varied according to age group.[a]

Aspects used to evaluate health systems can be access, coverage and equity. Quality is seen as a primary factor to be considered in such an evaluation.[c] Donabedian[7] proposes that the best strategy to evaluate these services must involve a model composed of structure, work process and results achieved. The structure refers to the characteristics of health care providers, their instruments and resources, as well as the physical and organizational conditions of their services. The process has to do with the relationship between the health service professionals and users that exists during such activities. The results involve the changes in health condition, knowledge, behavior and user satisfaction that result from the care given.[7] User satisfaction is characterized as the feelings that users have in relation to health care and how they evaluate this care, taking factors such as waiting time, travel time, communication with service providers and care received into account.

No studies were identified that evaluated dissatisfaction with dental care among population-based household samples or that considered that potential factors that are associated with dissatisfaction. Thus, understanding the prevalence of dissatisfaction and recognizing its associations to individual characteristics, in addition to the peculiarities that the service offers, can provide a foundation to consolidate health policies that are aimed at improving the care service provided to the population under study.

The aim of this study was to examine whether oral health subjectivity, dental care characterization, demographic and socioeconomic conditions are associated with users' dissatisfaction with dental care.

METHODS

This cross-sectional study was performed with 781 urban residents of the Brazilian municipality of Montes Claros, MG, Southeastern Brazil, in 2012. Based on a cluster sampling plan, one participant per household, aged 18 years or over, who had not suffered institutionalization, and had required and used dental care in the 12 months previous was considered. The estimated proportional frequency of dissatisfaction with the dental services was estimated in 50.0% of the population, with a 5.0% error margin, a non-response rate of 5.0%, and a 2.0 design effect in sample calculation for the finite population of Montes Claros (n = 344,427) (IBGE, 2010).[d]

A two-stage cluster sampling plan was performed. In the first stage, 30 census sectors were randomly selected per sample that were proportional to the size. The sampling fraction was calculated for each randomly selected sector, based on the number of households from each selected sector and the total number of households in the city. In the second stage, a percentage of blocks were randomly selected from each of the 30 sectors that were selected in the first stage by means of simple random sampling. The household from the selected blocks were visited and the individuals who met the inclusion criteria were invited to participate in the investigation. The sampling fraction of this stage was obtained by the ratio between the number of households visited in each sector, and the total number of households in this sector. The inclusion probability of each selected household was estimated based on from the product of the inclusion probability at each of the two stages. The response rate in each sector was incorporated and the final inclusion probability of each household was obtained.[24] Different weights were assigned to the elements of the sample, which were calculated using the inverse product of the inclusion probabilities at the various selection stages.[24]

[a] Ministério da Saúde, Secretaria de Atenção à Saúde, Secretaria de Vigilância em Saúde. SB Brasil 2010: Pesquisa Nacional de Saúde Bucal: resultados principais. Brasília (DF); 2012 [cited 2015 Feb 13]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/pesquisa_nacional_saude_bucal.pdf
[b] Ministério da Saúde. Projeto SB Brasil 2003: condições de saúde bucal da população brasileira 2002-2003: resultados principais. Brasília (DF); 2004 [cited 2015 Feb 13]. (Série Projetos, Programas e Relatórios). Available from: http://cfo.org.br/wp-content/uploads/2009/10/04_0347_M.pdf
[c] Vuori HV. Quality assurance of health sciences: concepts and methodology. Copenhagen: WHO Regional Office for Europe; 1982.
[d] Instituto Brasileiro de Geografia e Estatística. Cidades. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística; 2010 [cited 2011 Jun 10]. Available from: http://www.cidades.ibge.gov.br/xtras/home.php

A sample of 768 household representatives was estimated. This estimate considered a 5.0% non-response rate from 805 representatives. These participants met the required criteria to be included in the study as they reported that they had used dental care in the year previous, and as they responded to the question relating to the evaluation of the dental services. The interviews were performed by previously trained medicine, dentistry and mathematics students from a public higher education institution.

The dental care evaluation (dependent variable) was obtained from those who reported having used such services in the year previous was based on the following question: "Would you say that you are generally very satisfied, partially satisfied, neither satisfied nor dissatisfied, partially dissatisfied or very dissatisfied with the conditions found in dental care services?". The variable was dichotomized into satisfied (very satisfied; partially satisfied; neither satisfied nor unsatisfied) and dissatisfied (partially dissatisfied and very dissatisfied), in accordance with a previous study.[23]

For those who needed and were given dental care in the previous year, the absolute and relative values were estimated: percentage (%) and percentage with correction for design effect (%) of the variables relating to demographic, socioeconomic conditions and characteristics of dental care. Demographic conditions included: sex, age group (in years, discrete, and dichotomized by the lower limit of the 95% confidence interval) and race or skin color.

The socioeconomic conditions referred to education, marital status, income *per capita* and the participant's occupational status. Education, expressed in years spent in study, was categorized in accordance with the Brazilian teaching organization about basic education (primary and secondary) and higher education,[e] and was evaluated as a discrete variable in the analysis. Income *per capita* was calculated based on the monthly family income divided by the number of residents in that household and expressed in multiples of the national minimum wage: R$622,00 in May 2012 (US dollar exchange rate – US$1.00 = R$2.01).

Self perceived oral health was considered based on the subjective conditions of oral health, which were evaluated by the following question: "How would you classify your oral health?"[b] and dichotomized into great/good and fine/bad/terrible.

The following variables were considered to evaluate the characteristics of the dental care: clinic funding (private care/private insurance; public care); type of dentist (dental surgeon/specialist; dental surgeon/general practitioner;

hygiene technician/community agent/experienced dentist/student dentist); how the service was paid for (privately funded; health insurance; free/public insurance/pro bono); whether the dental care provider had the appropriate skills (yes; no).

The instrument's structure Assessment Dental Care System Satisfaction Questionnaire (ADCSSQ) was built based on a questionnaire designed to evaluate ophthalmologic care, the *Questionário de Responsividade ao Sistema de Assistência Ocular* (QRSAO – Ophthalmic Care System Satisfaction Questionnaire. The QRSAO, which was developed by the World Health Organization (WHO), covers ocular care aspects; it was translated to be fitting for the Portuguese language and Brazilian culture. The instrument consists of questions that address care, dignity, privacy, communication, autonomy, choice and infrastructure.[18] A decision was made to modify this instrument as it is to evaluate user satisfaction regarding the service used, following the parameters set out by the WHO. Furthermore, despite having been developed for ophthalmologic care, the instrument does not have questions that are specific only for this type of service, meaning its modification was not difficult. The questionnaire also includes questions regarding components from the Donabedian quality triad (structure-process-outcomes).[7] This instrument's reliability was evaluated before the data was collected.

The evaluation of dental care characteristics followed the guidelines as proposed by Donabedian's triad.[7] The considered aspects referring to the process were care promptness, dignity, privacy, communication, autonomy and choice. Infrastructure and user satisfaction were also considered along with dental care.

The associations between dissatisfaction with dental care and demographic, socioeconomic conditions, the subjectivity of oral health and characterization of dental care were estimated, as were the ADCSSQ structure and process aspects. Logistic regression was used with correction for the design effect. The odds ratio was calculated with a 5% significance level and 95% confidence intervals (OR/95%CI). The analyses were performed using SPSS® Statistics, version 19.0, software.

This research is in accordance with principles set out in Resolution 196/96 by the Brazilian National Health Council and was approved by the Ethics and Research Committee from the Brazilian Educational Association (Protocol 112, approved March 29th, 2010).

RESULTS

Of the 2,582 individuals whom were invited to participate in this study, 792 needed dental care less than one

year previous and successfully got it, and 10 did not include information about how long ago they obtained dental care. One person among the 792 refused to participate in this study. Thus, 781 individuals were considered to evaluate dental care satisfaction. A sample of 805 people was estimated with a 5.0% non-response rate. This rate was 0.12%, meaning that the investigated population is representative of the population in Montes Claros.

Of the 781 evaluated individuals, 9.0% (without correction for the design effect), i.e., 7.9%* (with correction for the design effect) reported that they were dissatisfied with the dental services they used. A significant 23.6%

portion of the participants (without correction for the design effect), i.e., 23.9%* (with correction for the design effect) required the service and did not get it (Figure).

Most users positively evaluated (great; good) the cleanliness and size of the dental care facilities, as they did regarding dignity, privacy, communication, autonomy and choice (Table 1).

Dissatisfaction was associated with demographic and socioeconomic conditions, the subjective conditions of oral health, characterization of dental care and aspects from the ADCSSQ during the bivariate analysis (Table 2).
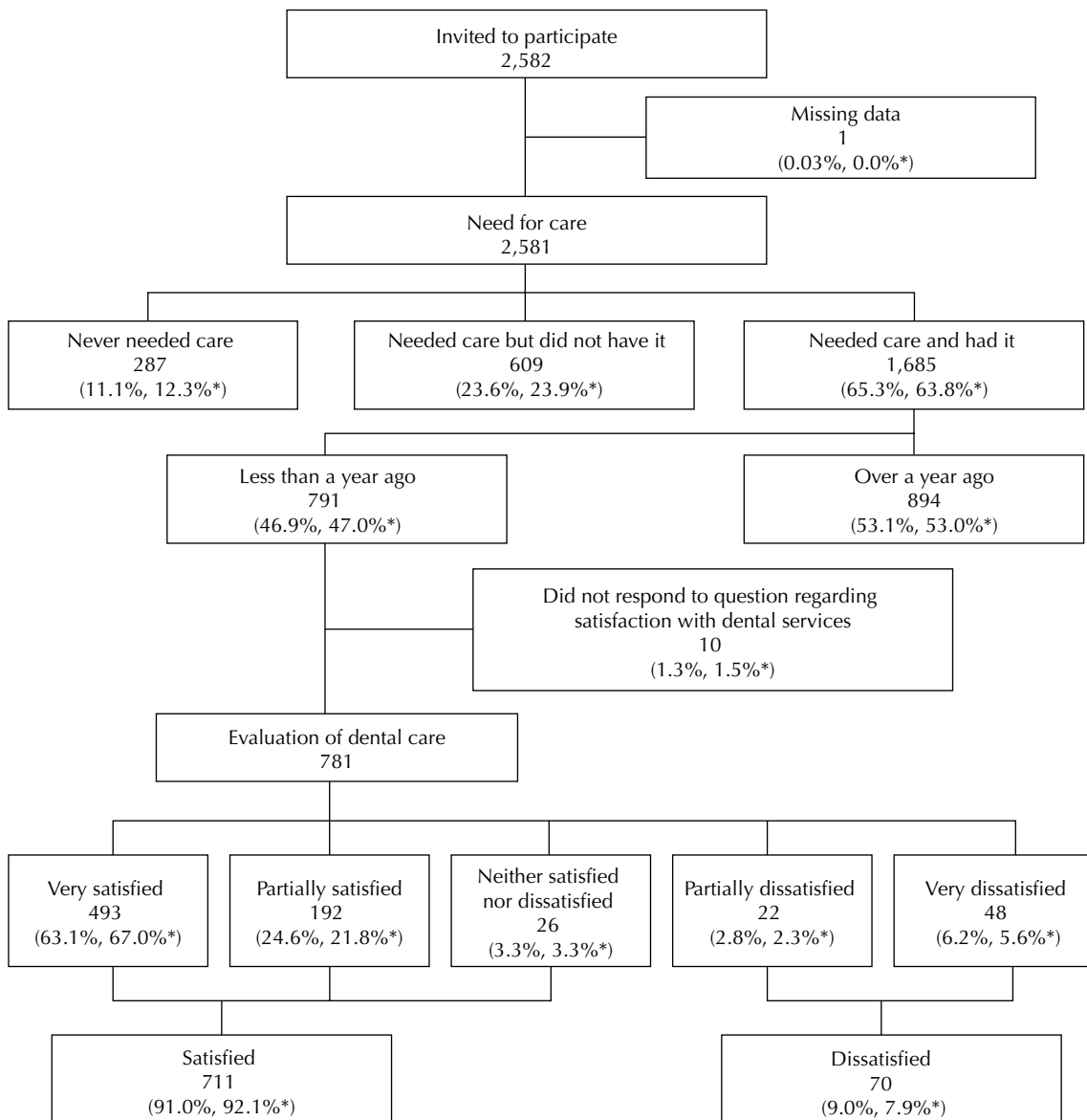

Figure. Flowchart of the participants involved in the epidemiological survey regarding their evaluation of dental care they received. Montes Claros, MG, Southeastern Brazil, 2012.

During the multiple analysis, dissatisfaction was found to be lower among the lesser educated individuals; was higher among those who self-evaluated their oral health as fine, bad or terrible; was higher among those who claimed that their dental care providers did not have appropriate skills; was higher among those who considered the respect they were given as fine, bad or terrible; was higher among those who evaluated the facilities' cleanliness, including toilets, as fine, bad or very bad; as well as being higher among those who reported the size of the waiting rooms and the examination rooms as being fine, bad or very bad (Table 3).

DISCUSSION

The prevalence of dental care dissatisfaction was low at 9.0%, i.e., 7.9%* (with correction for the design effect). Dissatisfaction was associated to a low education level, to a negative self-perception of oral health, to a perception that the dental care provider is inadequately skilled, to having been treated with a lack of dignity and an unsuitable infrastructure as per facility cleanliness and size. A considerable portion of the survey participants needed dental care and did not receive it, which may indicate that it is difficult to reach this service in this particular city. Previous studies identified low levels of dissatisfaction with dental care,[12,23] as well as with other health services.[6,10,16,22,25] The quality of dental care was rated as "very good or good" by Peres et al,[19] as it was during this investigation. This situation is known as the "elevation" effect on the reported satisfaction rates even when expectations regarding the services are negative.[16] Low levels of dissatisfaction with services used may indicate they offer good levels of resolvability and efficiency, which is a positive quality indicator. Health care effectiveness can be partly estimated by the users' satisfaction with the services provided, which relates to greater service use, adherence to therapeutic proposals membership and loyalty with the care provider.[23] However, characterizing the dissatisfied individuals is important to optimize the city's dental care.

The sample was primarily made of people with higher education, female individuals and those who use private care services. A previous 2003 study[20] that investigated health care in the adult Brazilian population showed that most of those using private services had higher levels of education and were male. Education empowers people by making higher incomes more accessible, which thereby enables the financing of private health services. In addition to higher incomes, access to information encourages health to be more valued, the resulting attitudes mean better health behaviors[19] and the desire to find more qualified professionals, which may explain the low prevalence of dissatisfaction.

When the structure-process-outcomes triad is considered[7] in dental service evaluations, the resulting field refers to the dependent variable (user dissatisfaction with dental services). During the multiple analyses, associations were identified between dissatisfaction and variables referring to: structure; cleanliness of the clinics examination rooms and their toilets; and the size of the waiting and examination rooms, as well as with variables referring to "process",[7] the experience of being received and treated with a lack of respect. According to the theoretical model proposed by Andersen and Davidson,[2] the levels of satisfaction experienced by health service users may result from a dynamic process in which all aspects of the model must be considered until the studied denominator is reached. Therefore, user satisfaction is a result of exogenous variables (ethnic and age groups), primary determinants of oral health (external environment, general reported health, oral health care systems and personal characteristics), oral health behaviors (personal habits and formal use of services) and oral health outcomes (oral health condition, perceptions of oral health condition and finally, patient satisfaction).[2] Among the variables proposed by Andersen and Davidson,[2] external environment, general reported health and oral health behaviors were not considered in this study.

Dissatisfaction with dental care was associated with lower time spent in education. During an evaluation of health services that used data from the 2003 World Health Survey, in 21 European countries, it was found that the higher the level of education, the lower the chance that those investigated would be satisfied with the service used, which differs from the findings of this study.[4] Research performed with American men suffering from prostate cancer showed that those with comprehensively higher education levels were most satisfied with health services used.[21] Education can influence dental care use[13] and the need for dental treatment.[15] Education may also reflect socioeconomic conditions, which has the potential to have an impact on solicitation of the service, the type of service used and the evaluation of these health services. This fact is due to individuals who have better educations may be more demanding toward rendered services, which may indicate a certain quality and resolvability of the service investigated during this study. Individuals with lower levels of education may find it more difficult to understand the factors that are related to the service used. There may be misunderstandings relating to treatment performed, difficulties in communicating with the professional and problems accessing the service by the patient, which generates greater dissatisfaction.

Dissatisfaction with dental care was associated with negative self-assessment of oral health (fine, bad or very bad). The theoretical model for using dental care, as proposed by Andersen and Davidson,[2] describes satisfaction and the perception of oral health by the patient as being in the field of oral health outcomes. This perception is

Table 1. Demographic and socioeconomic conditions, characteristics of dental care and aspects from the Assessment Dental Care System Satisfaction Questionnaire (ADCSSQ) among users. Montes Claros, MG, Southeastern Brazil, 2012. (n = 781)

Variable	%[a]
Demographic conditions	
Sex	
Female	73.0
Male	27.0
Age group (years)[b]	
≥ 18 ≤ 37	51.9
> 37 ≤ 84	48.1
Race or skin color[b]	
White/Asian	28.3
Brown/Black	71.7
Socioeconomic conditions	
Years spent in education[b]	
≥ 12	42.8
9 to 11	32.2
0 to 8	25.0
Marital status	
Married/Stable relationship	51.9
Separated/Divorced/Widowed	10.0
Single	38.2
Income *per capita* (minimum wages)[c]	
≥ 1	26.5
< 1	73.5
Occupational status[b]	
Working	55.3
Retired/Pensioner	8.9
Never worked	13.0
Unemployed	22.8
Subjective condition of oral health	
How would you classify your oral health?[b]	
Great/Good	76.9
Fine/Bad/Terrible	23.1
Dental care characterization	
Clinic funding[b]	
Private care/Private insurance	75.4
Public care	24.6
Type of dentist[b]	
Dental surgeon/specialist	56.6
Dental surgeon/general practitioner	37.6
Hygiene technician/Community agent/Experienced dentist/Student dentist	5.8
How the service was paid for[b]	
Privately funded	59.9
Health insurance	15.3
Free/Public insurance/Pro bono	24.8
Did the dental care provider have the appropriate skills?[b]	
Yes	94.5
No	5.5

Continue

Continuation

ADCSSQ	
During your last visit, how would you rate...	
Regarding promptness of care	
... The time spent traveling to your dental care provider?[b]	
Great/good	81.7
Fine/bad/terrible	18.3
... The time spent waiting before being seen?[b]	
Great/good	80.9
Fine/bad/terrible	19.1
Regarding dignity	
... The way you were received and the respect that you were given?[b]	
Great/good	97.0
Fine/bad/terrible	3.0
Regarding privacy	
... The way your privacy was respected during examinations and treatments?[b]	
Great/good	97.7
Fine/bad/terrible	2.3
... The way the service was provided to make sure you were able to speak privately[b]	
Great/good	93.0
Fine/bad/terrible	7.0
Regarding communication	
... The clarity with which the service provider explained things to you?[b]	
Great/good	94.7
Fine/bad/terrible	5.3
... The time given to enable you to ask questions regarding your dental problem or treatment?[b]	
Great/good	90.1
Fine/bad/terrible	9.9
... The quality of available information regarding other types of examinations or treatments?[b]	
Great/good	85.2
Fine/bad/terrible	14.8
Regarding autonomy	
... Your involvement in the decision making process regarding your care or treatment?[b]	
Great/good	88.6
Fine/bad/terrible	11.4
Regarding choice	
... The freedom you had to choose your dental care provider?[b]	
Great/good	87.7
Fine/bad/terrible	12.3
Have you always tried to see the same dentist your whole life?[b]	
Yes	39.4
No	59.3
Regarding infrastructure	
... The cleanliness of the clinic as a whole, including the bathrooms?[b]	
Great/good	96.5
Fine/bad/terrible	3.5
... The size of the waiting room and the room where you were examined?[b]	
Great/good	87.7
Fine/bad/terrible	12.3

[a] Corrected for the design effect.
[b] The number of respondents was lower than the number of participants.
[c] Current minimum monthly wage = R$622,00 (US$1.00 = R$2.01, May 2012).

Table 2. Bivariate analysis between dissatisfaction with dental services and other independent variables among dental service users. Montes Claros, MG, Southeastern Brazil, 2012. (n = 781)

Variable	Satisfied %[b]	Dissatisfied %[b]	OR[a]	95%CI[a]	p
Demographic conditions					
Sex					
Female	91.5	8.5	1		
Male	93.8	6.2	0.72	0.34;1.51	0.362
Age group (years)[b]					
≥ 18 ≤ 37	92.9	7.1	1		
> 37 ≤ 84	91.2	8.8	0.88	0.76;2.08	0.361
Race or skin color[b]					
White/Asian	91.4	8.6	1		
Brown/Black	92.5	7.5	0.86	0.50;1.50	0.585
Socioeconomic conditions					
Years spent in education[b]					
≥ 12	93.7	6.3	1		
9 to 11	93.0	7.0	1.12	0.57;2.23	0.726
0 to 8	88.2	11.8	1.99	1.13;3.52	0.020
Education/years in study discreet[b]	N/A	N/A	0.93	0.88;0.97	0.005
Marital status					
Married/stable relationship	92.2	7.8	1		
Separated/Divorced/Widowed	88.3	11.7	1.57	0.59;4.16	0.347
Single	93.0	7.0	0.88	0.53;1.47	0.615
Income *per capita* (minimum wages)					
≥ 1	93.0	7.0	1		
< 1	92.1	7.9	1.14	0.54;2.40	0.715
Income *per capita* (discrete)	N/A	N/A	1	1.00;1.00	0.380
Work[c]					
Working	92.8	7.2	1		
Retired/Pensioner	85.2	14.8	2.23	0.72;6.88	0.155
Never worked	93.0	7.0	0.97	0.38;2.49	0.945
Unemployed	92.8	7.2	1.00	0.42;2.37	0.992
Subjective condition of oral health					
How would you classify your oral health?[b]					
Great/Good	95.5	4.5	1		
Fine/Bad/Terrible	80.4	19.6	5.20	2.25;12.02	0.000
Dental care characterization					
Clinic funding[b]					
Private care/Private insurance	94.1	5.9	1		
Public care	86.2	13.8	2.57	1.20;5.51	0.018
How the service was paid for[b]					
Privately funded	93.4	6.6	1		
Health plan	96.1	3.9	0.57	0.18;1.85	0.336
Free/Public insurance/Pro bono	86.2	13.8	2.26	0.98;5.24	0.057
Means of transport used to reach the consultation site[b]					
Private vehicle/Taxi	92.3	7.7	1		
Public transportation/Motorcycle taxi	92.6	7.4	0.96	0.40;2.27	0.914
On foot/Bicycle/Other	91.8	8.2	1.07	0.53;2.15	0.850

Continue

Continuation

Did the dental care provider have the appropriate skills?[b]					
Yes	95.1	4.9	1		
No	44.9	55.1	24.02	11.90;48.51	0.000
ADCSSQ ... regarding your last consultation how would you classify ...					
Regarding promptness of care					
... The time spent traveling to your dental care provider?[b]					
Great/Good	92.0	8.0	1		
Fine/Bad/Terrible	92.4	7.6	0.94	0.51;1.75	0.844
... The time spent waiting before being seen?[b]					
Great/Good	95.0	5.0	1		
Fine/Bad/Terrible	80.6	19.4	4.61	2.40;8.85	0.000
Regarding dignity					
... The way you were received and the respect that you were given?[b]					
Great/Good	93.7	6.3	1		
Fine/Bad/Terrible	45.6	54.4	17.64	6.46;48.19	0.000
Regarding privacy					
... The way your privacy was respected during examinations and treatments?[b]					
Great/Good	93.2	6.8	1		
Fine/Bad/Terrible	59.9	40.1	9.24	2.47;34.51	0.002
... The way the service was provided to make sure you were able to speak privately[c]					
Great/Good	93.8	6.2	1		
Fine/Bad/Terrible	71.4	28.6	6.03	2.87;12.68	0.000
Regarding communication					
... The clarity with which the service provider explained things to you?[b]					
Great/Good	94.4	5.6	1		
Fine/Bad/Terrible	54.2	45.8	14.30	6.71;30.46	0.000
... The time given to enable you to ask questions regarding your dental problem or treatment?[b]					
Great/Good	94.4	5.6	1		
Fine/Bad/Terrible	74.2	25.8	5.87	2.81;12.26	0.000
... The quality of available information regarding other types of examinations or treatments?[b]					
Great/Good	94.9	5.1	1		
Fine/Bad/Terrible	77.3	22.7	5.43	2.87;10.29	0.000
Regarding autonomy					
... Your involvement in the decision making process regarding your care or treatment?[b]					
Great/Good	95.2	4.8	1		
Fine/Bad/Terrible	70.0	30.0	2.02	8.56;19.84	0.000
Regarding choice					
... The freedom you had to choose your dental care provider?[b]					
Great/Good	94.7	5.3	1.0		
Fine/Bad/Terrible	74.6	25.4	6.07	2.75;13.42	0.000
Have you always tried to see the same dentist your whole life?[c]					
Yes	95.8	4.2	1		
No	89.4	10.6	2.73	1.22;6.08	0.000
Regarding infrastructure					
... The cleanliness of the clinic as a whole, including the bathrooms?[b]					
Great/Good	93.5	6.5	1		
Fine/Bad/Terrible	54.2	45.8	12.21	5.09;29.33	0.000
... The size of the waiting room and the room where you were examined?[b]					
Great/Good	94.4	5.6	1		
Fine/Bad/Terrible	76.0	24.0	5.36	2.94;9.77	0.000

OR crude: odds ratio – crude values; N/A: Not applicable; ADCSSQ: Assessment Dental Care System Satisfaction Questionnaire
[a] Corrected for the design effect.
[b] The number of respondents was lower than the number of participants (n = 781).

Table 3. Multiple analysis between dissatisfaction with dental care and statistically significant variables among dental services users. Montes Claros, MG, Southeastern Brazil, 2012. (n = 781)

Variable	OR[adjusted][a]	95%CI[a]	p
Socioeconomic conditions			
Education/Years in study discreet[b]	0.93	0.85;1.00	0.050
Perception of general and oral health			
How would you classify your oral health?[b]			
Great/Good	1		
Fine/Bad/Terrible	3.22	1.21;8.60	0.022
Dental care characterization			
Did the dental care provider have the appropriate skills?[b]			
Yes	1		
No	13.42	6.09;29.55	0.000
ADCSSQ items			
Regarding dignity			
... The way you were received and the respect that you were given?[b]			
Great/Good	1		
Fine/Bad/Terrible	3.94	1.34;11.56	0.015
Regarding infrastructure			
... The cleanliness of the clinic as a whole, including the bathrooms?[b]			
Great/Good	1		
Fine/Bad/Terrible	2.78	1.02;7.62	0.047
... The size of the waiting room and the room where you were examined?[b]			
Great/Good	1		
Fine/Bad/Terrible	3.00	1.32;6.84	0.011

ADCSSQ: Assessment Dental Care System Satisfaction Questionnaire
[a] Corrected for the design effect.
[b] The number of respondents was lower than the number of participants (n = 781).

influenced by the cultural background, beliefs and values of the subject, in addition to offering a global perspective of well-being and reflecting the extent to which a person can functionally, comfortably and freely live within society.[2] Rodrigues et al[23] evaluated patients' satisfaction with dental care and found an association between satisfaction and perception of tooth and gum appearance as being great or good. This data provides a parameter that can be established between the perception of the subject, in relation to his/her health, and the evaluation that this makes on the services provided in his/her community.[23]

The dental care provider not having appropriate skills, in the eyes of the user, is associated to greater dissatisfaction with the dental care used. Having a job in the health sector is characterized by uncertainties that arise from the indeterminacy of the demands. Technically standardizing such an occupation is difficult, which can result in a lack of knowledge regarding certain procedures or even in them being incorrectly administered. Dentists must have communication and management skills as well as be able to monitor technological developments, but most of all, these professionals have to possess the technical skills necessary for this

profession.[5] However, there is no precise diagnostic tool regarding the needs of this sector, which generates divergences between educational actions and the needs of the health services.[1] The lack of ability in these professionals, from the users' point of view, may be due to inappropriate treatment, the problem not being resolved, the patient not being made completely aware of the problem, insecurity by the professional and the service being neglected, which may result in dissatisfaction. One possible explanation for the observed association could be the lack of evaluation and control of the professionals' performance in their jobs, the lack professional motivation (due to low wages) and the lack of an effective career plan, which has an influence on absenteeism and the high turnover of these professionals. However, this reference can still explain the association found.[11] Continuous evaluation strategies are needed from the points of view of managers, professionals and users of public and private health services.

ADCSSQ aspects that more negatively influenced the level of satisfaction in respondents were dignity and infrastructure. Greater dissatisfaction was observed among those who reported their experience of having

been received and treated with respect as regular, bad or terrible, which is a result similar to the investigation on the resolvability and quality of ophthalmological care in Southern Brazil.[3] The attitudes of health professionals, who can generate greater satisfaction with the service, refer to how they greet the patient, how attentive they are, their interest in the case, their use of plain language, how they explain the problem and whether they give the patient the opportunity to clarify their doubts.[3] the association between the experience of not being treated with respect and dissatisfaction reflects the importance of a good dentist-patient relationship. Donabedian[7] states that the interpersonal patient-professional relationship has an influence on health service evaluations.

Dissatisfaction with dental services was higher among users who considered the cleanliness of the clinic's facilities, including the bathrooms, and the sizes of the examination and waiting rooms to be fine, bad or very bad. Issues related to the structure of the facility, such as its organization,[6] may influence user satisfaction. Regarding the evaluation of the services' structure, satisfaction evaluates context and the inputs.[9] Donabedian[7] proposes the indicator framework to evaluate the resources used by the service and the factors that are related to the site's infrastructure, which is one of the determinants of satisfaction. Structural factors can influence access to the service, treatment time, forms of payment, among others.[9] Dissatisfaction with the size and cleanliness of the facilities can generate a negative view of the place with dissatisfaction following as a consequence. In summary, associations were identified between dissatisfaction (result) and variables related to the structure of services and the care

process according to the structure-process-outcomes triad, which demonstrates the adequacy of the theoretical model proposed by Donabedian.[7]

Some of the study's limitations are the fact that the ADCSSQ only has two questions that assess structure, and that the instrument does not measure the resolvability of the service, which is an important factor for evaluating the results. The dental care evaluation process, from the perspective of the users, is dynamic, as are the variables investigated; therefore, causes and effects vary over time. This is a cross-sectional study that does not make establishing a temporal relationship between observed associations possible. Thus, interpreting the findings from such is limited. However, as this is a theme that has been little explored, this study contributes in terms of knowledge construction regarding dental service evaluations.

A high rate of satisfaction with dental care was observed. Factors associated with dissatisfaction were lower education levels, negative self-perception of oral health, lack of ability on behalf of the professional from the user's point of view, being treated disrespectfully and having a negative opinion regarding the cleanliness of the rooms and bathrooms, as well as the size of the waiting and examination rooms. The outcome, dissatisfaction with the dental care, is associated to variables relating to the structure and process. The re-evaluation of dental evaluation policies is suggested as is performing educational interventions aimed at improving the quality of care among professionals by responsible agencies: public services, in its sphere of activity; academic training; and the Brazilian Regional Council of Dentistry, in monitoring professional activity.

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