

**USE OF DENTAL PROSTHESIS AMONG ELDERLY: A SOCIAL PROBLEM**  
**USO DE PRÓTESE DENTÁRIA ENTRE IDOSOS: UM PROBLEMA SOCIAL**  
**USO DE PRÓTESIS DENTAL ENTRE ANCIANOS: UN PROBLEMA SOCIAL**

Received: 15/05/2014  
Approved: 08/11/2014

**Mário Alfredo Silveira Miranzi<sup>1</sup>**  
**Maristela Marques Amuí<sup>2</sup>**  
**Helena Hemiko Iwamoto<sup>3</sup>**  
**Darlene Mara dos Santos Tavares<sup>4</sup>**  
**Sandra Azevedo Pinheiro<sup>5</sup>**  
**Marli Aparecida Reis Coimbra<sup>6</sup>**

The objective of this study is to know and describe socio-demographic characteristics, care in conservation, and type of limitation or interference from the use of dental prostheses. This is a descriptive transversal study conducted with 167 elderly patients, dental prosthesis wearers, in an area covered by the Family Health Program of a municipality of Minas Gerais/Brazil. Data collection was performed at home or at the health unit. The results showed higher frequencies for age range 60|-70 years old (71.9%), incomplete primary education (64.1%), earning a minimum wage (58.5%) and making use of prostheses of 20|-40 years (49.7%). Most have prosthesis in inadequate conditions (70.1%), but perform proper hygiene (87.4%), 40% complain of discomfort, 60% have already switched prosthesis and 75% did not receive any information about prosthesis maintenance. It should be noted that the pursuit of oral health by dental prosthesis wearer depends on continued guidance.

**Descriptors:** Total Prostheses; Oral health; Dental care for Seniors.

O objetivo deste estudo foi conhecer e descrever características sócio-demográficas, cuidados na conservação, tipo de limitação ou interferência oriunda do uso de próteses dentárias. Trata-se de um estudo descritivo, transversal realizado com 167 idosos portadores de prótese dentária em uma área de abrangência da Saúde da Família de um município de Minas Gerais/Brasil. A coleta de dados foi realizada nos domicílios ou na unidade de saúde. Os resultados mostraram maiores frequências para intervalo de idade 60|-70 anos (71,9%), ensino fundamental incompleto (64,1%), ganhar um salário mínimo (58,5%) e fazer uso de prótese de 20|-40 anos (49,7%). A maioria possui próteses em condições inadequadas (70,1%), mas realiza higienização correta (87,4%), 40% queixam de desconforto, 60% já trocaram de prótese e 75% não receberam qualquer tipo de informação sobre manutenção da prótese. Ressalta-se que a busca da saúde bucal pelo usuário de prótese depende da orientação profissional permanente.

**Descritores:** Prótese total; Saúde bucal; Assistência odontológica para Idosos.

El objetivo de este estudio fue identificar y describir las características sociodemográficas, el cuidado en la conservación de la prótesis, el tipo de limitación o interferencias derivadas de su uso. Se trata de un estudio descriptivo transversal realizado con 167 ancianos que usán dentadura en una área de cobertura de salud de la familia de un municipio de Minas Gerais, Brasil. La recolección ocurrió en los hogares o unidad de salud. Los resultados mostraron frecuencias más altas para el rango de edad de 60|-70 años (71,9%), con educación primaria (64,1%), ganar un salario (58,5%) y hace uso de prótesis 20|-40 años (49,7%), la mayoría tienen prótesis inadecuadas (70.1%), pero realiza una higiene adecuada (87,4%), 40% se queja de la incomodidad, el 60% había cambiado de prótesis y el 75% no recibió ninguna información sobre el mantenimiento de la prótesis. Se insiste en que la búsqueda de la salud bucal por el usuario prótesis depende de la orientación profesional permanente.

**Descritores:** Dentadura completa; Salud bucal; Cuidado dental para ancianos.

<sup>1</sup>PhD in Public Health. Department of Social Medicine. Federal University of Triangulo Mineiro (UFTM). [mmiranzi@mednet.com.br](mailto:mmiranzi@mednet.com.br)

<sup>2</sup>Specialist in Public Health. Dentist Surgeon of Municipal Health Department of Minas Gerais-Uberaba.

<sup>3</sup>PhD in Public Health. Professor of the Strict Sense Graduate Program of Health Care of UFTM. [helena.iwamoto@gmail.com](mailto:helena.iwamoto@gmail.com)

<sup>4</sup>PhD in Public Health. Professor of the Strict Sense Graduate Program of Health Care for the UFTM. [darlenetavares@enfermagem.uftm.edu.br](mailto:darlenetavares@enfermagem.uftm.edu.br)

<sup>5</sup>PhD in Preventive Medicine. Professor of UFTM. [primeirocavaco@gmail.com](mailto:primeirocavaco@gmail.com)

<sup>6</sup>Master in Health Care by UFTM. [mmarlimerlin@gmail.com](mailto:mmarlimerlin@gmail.com)

## INTRODUCTION

The Statute of the Elderly<sup>1</sup> protects those covered, among others, by the rights of preservation of physical and mental health, as well as social inclusion and social welfare. In Brazil, individuals over 60 years old are considered elderly people.

Among the aspects relating to health and quality of life (QOL) of elderly, oral health plays an important role since its impairment can negatively affect nutritional status, physical and mental well being as well as decrease the pleasure of an active social life. Regarding oral health, statistics of Brazilian reality show a worrying picture: about 75% of elderly Brazilians are edentulous in one of the arches. This data reveals lack of access to preventive and curative dentistry<sup>2</sup>.

In elderly patients between 65 and 74 years old, more than three million need total dental prosthesis (in the two dental arches) and other four million need to use partial denture in one of the arches. Looking at the period from 2003 to 2010, in Brazil, the percentage ranged, at one point, from 24% to 23% of elderly people in need of dentures in one of the arches and from 16% to 15% of full double prosthesis<sup>3</sup>.

Edentulism (total lack of teeth) causes functional problems such as difficulty in chewing, swallowing and speech. Dysfunction in the stomatognathic system and that can lead to anemia, malnutrition, digestive problems, aesthetic and biopsychosocial changes. Given the factors involved in satisfying prosthesis user, we can highlight the psychosocial factor (aesthetics) as a major determinant in the success of treatment with consequent satisfaction of the patient due to constant pursuit of current society for physical beauty<sup>4</sup>.

Preventive and educational actions in oral health in Brazil have traditionally been directed to prioritize children in individual or collective programs. Care for the elderly has been systematically excluded from the

collective oral health actions, being restricted to patients who individually seek dental services, especially in the particular context<sup>5</sup>.

The elderly population demands attention in every way, especially in the health sector, aiming to better QOL. In this way, dentistry has key role in prevention, maintenance and recovery of oral health.

One of the solutions for rehabilitation of edentulous patients is in the manufacture of prostheses that restore the masticator, aesthetics and phonetics functions, which depend on all elements of the oral cavity. It is important to recover the facial feature which avoids the stigma of the stereotypical image of old aged person: individual with withered cheeks, big nose and protruded chin.

The dental prosthesis provides substitutes for the coronal portion of the teeth, aiming to restore the lost functions, the aesthetic appearance, comfort, patient's health, phonetics, posture and restore a balance in the stomatognathic system<sup>6</sup>.

In developed countries, such as Japan, the total edentulous does not exceed 1%<sup>7</sup>. On the other hand, in users of the Unified Health System (SUS) in Belo Horizonte, the average of natural teeth per person over 65 years old is 8.4 and the number of total edentulous in the age group of 60 years old reaches 36%. Although edentulism persists as a severe public health problem, it can be noticed a dynamic of overcoming the problem. It is estimated that in the next two decades in Western countries the number of edentulous in the group 45-64 years old will reduce from 39% to 9% and from 71% to 37% in the age group of 65 years old or more<sup>7</sup>.

The Dental Health Team of the Family Health Strategy, implemented in several Brazilian cities, has as one of the goals to get health professionals closer to community, knowing people better and the factors involving the health-disease process of each family monitored, with a view to

build alternative treatment, health promotion and disease prevention.

In this direction, the guiding question that motivated this study was: can the presence of the dental health team with the elderly users of prosthesis improve the conditions of use?

Preparation of projects, from the epidemiological situation, facing the geriatric population in the Family Health Team coverage area may favor the quality of life of denture users.

The objective of this study was to know and describe socio-demographic characteristics, care in conservation, type of limitation or interference from the use of dental prostheses.

## METHOD

This is an observational, descriptive and cross-sectional study, performed with a population above 60 years old living in an area covered by the Family Health Team (FHT) consisting of doctors, nursing staff, oral health staff and community health workers that serves approximately 970 families and has 230 individuals with age group above 60 years old registered in a municipality in Minas Gerais state, in the second half of 2006.

Inclusion criteria were: people aged 60 or more, who make use of dental prosthesis and agreed to participate in this research.

Collection of quantitative data was performed using a semi-structured instrument, previously tested in a pilot study and qualitative data resulting from self-perception. Interviews were conducted at participants' homes or at the Family Health Unit. Variables highlighted included: socio-demographic data (gender, age, education and individual income); health regarding the use of the prosthesis (type of prosthesis, care, prosthetic conditions and time of use); conditions for prosthesis maintenance (remove it while sleeping and local forms of hygiene) and type of limitation or interference that results from the use of the prosthesis.

Assessing the conditions of dental prosthesis was performed by researchers through observation and related to theoretical foundation. Results were grouped into three categories: a) prosthesis in poor condition when there was plaque, tartar, wear and missing teeth; b) good condition when presented no irregularity and c) other in those situations where the elderly refused removal of the prosthesis and/or used fixed metal clasps on the prosthesis and upper lateral incisors that jeopardized the aesthetic.

Data were stored in data spreadsheets using Microsoft Excel computer program and analyzed in quantitative and qualitative ways.

This project was approved by the Research Ethics Committee of the Federal University of Triangulo Mineiro (CEP-UFTM) under protocol number 0734. Ethical aspects of research involving human subjects were considered, as recommended in Resolution 196/96 of the National Health Council (CNS) regarding the required reading and signing the informed consent form, the treatment of participants with dignity, respecting their autonomy, confidentiality guarantee, freedom of withdrawal, access to empirical material and the presence of the researcher in any stage of the proceedings or later.

## RESULTS

At first, the study included 203 elderly people (88.3%) of the 230 registered in the area covered by the Family Health Team; however, of these, 36(15.6%) did not use the prosthesis and 27(11.7%) were not found. Therefore, in this study 167(72.6%) elderly participated, consisting of 108 women(64.7%). There was a predominance of the use of dental prostheses in the elderly age group 60|-70 years old(71.9%) and in both sexes, although the frequency among women (74.1%) is higher compared men (67.8%). Almost half of the elderly (48.5%) is in the salary range of a minimum wage and 31.7% less than the minimum wage. Among men, there was a higher percentage for those earning more than minimum

wage(52.5%) and among women the percentage is higher(51.9%) for those who earn a salary. It is observed prevalence of use of dental prosthesis in elderly with low education (incomplete primary education or illiterate - 89.2%). Among men, this percentage is as high as 93.2% according to Table 1.

**Table 1** - Elderly with dental prosthesis, according to sex, age, income and education. Uberaba/MG 2006.

Age Group	Men (N,%)	Women (N, %)	Total (N, %)
60 - 70 anos	40 (67,8%)	80 (74,1%)	120(71,9%)
70 - 80 anos	15 (25,4)	21 (19,4%)	36(21,6%)
80 anos e +	4 (6,8%)	7 (6,5%)	11(6,6%)
<b>Total</b>	<b>59(100,0%)</b>	<b>108(100,%)</b>	<b>167(100,0%)</b>
<b>Individual Income</b>			
No income	1 (1,7%)	28 (25,9%)	29(17,4%)
- de1 MW*	2 (3,4%)	2 (1,9%)	4 (2,4%)
1 MW	25 (42,4%)	56 (51,9%)	81(48,5%)
+ de 1 MW	31 (52,5%)	22 (20,4%)	53(31,7%)
<b>Total</b>	<b>59(100,0%)</b>	<b>108(100,0%)</b>	<b>167(100,0%)</b>
<b>Education</b>			
Illiterate	11(18,6%)	31(28,7%)	42(25,1%)
Incomplete primary education	44(74,6%)	63(58,3%)	107 (64,1%)
Complete primary education	1(1,7%)	3 (2,8%)	4 (2,4%)
Incomplete secondary education	0 (0,0%)	1 (0,9%)	1 (0,6%)
Secondary education	3 (5,1%)	9 (8,3%)	12 (7,2%)
High education	0 (0,0%)	1 (0,9%)	1 (0,6%)
<b>Total</b>	<b>59(100,0%)</b>	<b>108(100,0%)</b>	<b>167 (100,0%)</b>

\* MW - Minimum Wage

The higher time of use of dental prosthesis was 20|-30 years (33.9%), followed by 30|-40 years in men (25.4%), and similar percentages between 10 to 50 years (slightly more than 20% in each decade) in women. Total dental prosthesis (upper and lower arches) appears more often in men (55.9%) and women (68.5%), as shown in Table 2.

**Table 2** - Elderly with dental prosthesis, regarding sex, time of use and type of prosthesis. Uberaba/MG, 2006.

Time of use	Men (N, %)	Women (N, %)	Total (N, %)
01 -5 years	5 (8,5%)	5(4,6%)	10(6,0%)
05 -10 years	3(5,1%)	4 (3,7%)	7(4,2%)
10 -20 years	10(16,9%)	25 (23,1%)	35(21,0%)
20 -30 years	20(33,9%)	23 (21,3%)	43(25,7)
30 -40 years	15(25,4%)	25 (23,1%)	40(24,0)
40 -50 years	6 (10,2%)	22 (20,4%)	28(16,8)
Do not remember	0 (0,0%)	4(3,7%)	4 (2,4%)
<b>Total</b>	<b>59(100,0)</b>	<b>108(100,%)</b>	<b>167(100,0)</b>
<b>Type of prosthesis</b>			
Total (upper and lower)	33 (55,9%)	74 (68,5%)	107 (64,1%)
Total upper	9(15,3%)	6(5,6%)	15(9,0%)
Total upper and partial lower	2 (3,4%)	17 (15,7%)	19 (11,4%)
Partial upper and lower	13 (22,0%)	9 (8,3%)	22 (13,2%)
Partial upper	2(3,4%)	2(1,9%)	4(2,4%)
<b>Total</b>	<b>59 (100,0%)</b>	<b>108 (100,0%)</b>	<b>167 (100,0%)</b>

The hygiene conditions are poor in both men (71.2%) and women (69.4%) and the site of frequent cleaning is the sink in men (83.1%) and women (89.8%), as in Table 3.

**Table 3** - Elderly with dental prosthesis, according to sex, prosthesis conditions and hygiene location. Uberaba/MG, 2006.

Prosthesis conditions	Men (N,%)	Women (N, %)	Total (N, %)
Good conditions	16(27,1%)	30 (27,8%)	46 (27,5%)
Poor conditions	42(71,2%)	75 (69,4%)	117(70,1%)
Others	1 (1,7%)	3 (2,8%)	4 (2,4%)
<b>Total</b>	<b>59(100,0%)</b>	<b>108 (100%)</b>	<b>167(100%)</b>
<b>Hygiene location</b>			
In the sink	49 (83,1%)	97 (89,8%)	146(87,4%)
In the sink with water inside	7 (11,9%)	9 (8,3%)	16 (9,6%)
Bowl with water	1 (1,7%)	0 (0,0)	1 (0,6%)
In the water tank	2 (3,4%)	2 (1,9%)	4 (2,4%)
<b>Total</b>	<b>59(100%)</b>	<b>108 (100%)</b>	<b>167(100%)</b>

## DISCUSSION

Epidemiological studies in oral health have also been frequently supplemented with data of socioeconomic conditions, considering the importance of the influence on diseases and health conditions, being thus recognized as determinants of health and access to service<sup>2</sup>.

Importantly, those surveyed, elderly assisted by oral health professionals of coverage area of a Family Health Team in a municipality of the municipality of Minas Gerais, Brazil, have agreed to participate in the research. Similar to other studies, elderly participants showed up eager to participate in oral health activities, making them more integrated with society and improving self-esteem<sup>8,9</sup>.

Increase in life expectancy, combined with declining birth rates, has been promoting changes in the population pyramid in Brazil, resulting in the aging population. Faced with the reality of demographic changes started in the last century, we can observe an increasingly aging population, and it highlights the importance of ensuring not only the elderly to live longer, but with good quality of life<sup>10</sup>.

Based on the reports of the elderly in research, oral health condition interferes significantly on the social and emotional lives, and most (87.9%) perceive their oral health as poor, showing dissatisfaction with the aesthetic and functional conditions. Oral health plays an important role in the quality of life of older people, and it could adversely affect the nutritional status, physical and mental well-being and reduce social interaction<sup>8</sup>.

Manufactured goods, feeding outside the residence, the frequency on feed intake and the difficulty of access to private places to carry out the cleaning of the oral cavity and the prosthesis possible tooth decay and periodontal diseases and as a result, individuals lose teeth increasingly early<sup>10,11</sup>.

In a prospective study, it was found that the majority of the population in old age (70%) has removable total dentures, requiring constant guidelines to conduct reviews in the dental prosthesis<sup>11</sup>. Dental

prosthesis can offer good conditions for the rehabilitation of the masticator strength, provided it is in functional harmony with the stomatognathic system.

In a study to investigate the clinical quality of total dental prosthesis and the satisfaction of individuals who use it, it was observed that the quality of the prosthesis determines the degree of satisfaction and oral health, and functional performance in mastication and esthetics<sup>12</sup>.

Subtraction of dental elements impairs the quality of life especially in functional and esthetic aspects of chewing. Oral health is directly influenced by the cleaning condition of dental prostheses. The relationship between quality of life and socioeconomic and demographic factors, oral health knowledge variables, have emphasized the need for oral health knowledge to improve scores for quality of life<sup>13</sup>.

Among the elderly, 24% have dental prosthesis for 30|-40 years and 25.7% of 20|-30 years. And most (64.1%) have total dental prosthesis, with percentages higher among women (68.5%). These data indicate that approximately 65% of the elderly extracted teeth and it becomes more worrying when one considers that approximately two-thirds of the study population is in the age group of 60|-70 years old, which indicates that many began to extract teeth still young. Similar results were found in another study in another country<sup>14</sup>.

Edentulism is the result of successive extractions, dental cavities and periodontal disease. Study found that 56% of the elderly have tooth loss and need full dentures<sup>12</sup>. There is a possible resignation by the elderly to accept oral disease as inevitable, perhaps because they belong to a time of high prevalence of decays, where treatments were based on the extraction and placement of full dentures, regardless of the possibility of rehabilitation.

When the dentist cannot adjust the prosthesis in the oral cavity or when there is difficulty in adaptation, this fact can trigger a series of discomforts

compromising speech, chewing and the aesthetics of the individual. Full denture wearer thinks in a wrong or misguided way, that discomfort due to the use of the prosthesis is part of the adaptation process<sup>15</sup>.

When checking the conditions of use of dental prosthesis, it was observed that 70.1% were in poor condition of adaptation and incorrect use, causing dissatisfaction in the elderly. However, the aforementioned interference could be solved with oral health professional guidelines. The majority (87.4%) of the elderly makes the cleaning of the prosthesis in the sink and 9.6% makes cleaning of the prosthesis in the sink with water. Studies<sup>16-18</sup> recommend cleaning in the sink or bowl full of water to avoid breakage or other damage to the prosthesis in case of a fall.

It is necessary that the prostheses are cleaned and disinfected daily, aiming the conservation of health and oral tissues, since the maintenance of healthy mucous membrane is related to the degree of cleanliness of the prosthesis, which is based on the tissues. Food debris that accumulates in the mucous interface and prosthesis combined with moisture and heat provides an environment for the proliferation of pathogenic micro-organisms<sup>17</sup>.

It is important to note that 40% of seniors reported discomfort in the use of their prostheses. The main dissatisfaction points raised by the elderly regarding the use of dental prosthesis was the difficulty in speech (32.5%), stability of the prosthesis (21.5%), discomfort when chewing (17.3%), aesthetics 11.3%) and others (17.4%). The restoration of lost functions with the extraction of teeth is the goal of dental prosthesis. Several factors can lead to satisfaction or not with respect to prosthetic rehabilitation. Dissatisfaction of the elderly was not perceived by the professionals who put the prosthesis, which leads us to understand the need for monitoring of elderly after the placement of thereof.

Although 75% of the elderly have reported not receiving information about

the necessary precautions with the prosthesis, it was observed that many have habits considered correct, i.e., 69% remove the prosthesis to sleep and 45% put it in a glass with water. Some add to the water sodium hypochlorite (17.6%) sodium bicarbonate (11.8%), mouthwash, vinegar or lemon juice (19.6%). Only 5.9% put it in an empty glass, and others (0.12%) hold the prosthesis in the bathroom cabinet, under the pillow and in water with used coffee grounds.

It is recommended removing the dental prosthesis to sleep, so that the oral mucosa has time to recuperate during the sleep period, except people with bruxism<sup>18</sup>. Otherwise, we recommend the removal of the prosthesis for a minimum period of two hours at any time of day.

For people who have a habit of removing the dental prosthesis during the night, it is recommended to keep them immersed in nystatin solution to prevent the proliferation of fungi. There are other cleaning products for preventing proliferation of micro-organisms on prostheses such as sodium hypochlorite, chlorhexidine gluconate and alkali peroxides<sup>16</sup>.

Findings of this study corroborate others, most studies on oral health has shown that people with complete dentures have poor oral hygiene<sup>7</sup>. It is noteworthy that dental problems present in the elderly are complications resulting from pathological processes accumulated over the years as a result of poor hygiene, lack of guidelines and quality of the prostheses<sup>8</sup>.

One can see that when the elderly receive the prosthesis maintenance guidelines, there is an immediate response. In a study designed to verify the importance of frequent orientation of prostheses for the elderly, it was noticed a large increase in index considered outstanding, from 48.88% in the first assessment to 81.39% in the second, after the guidelines, which demonstrates the efficiency of guidelines and reception of the elderly. So we must consider that the elderly with dental prostheses are in need of attention and

information on oral health, and if they are well motivated, they will respond to stimuli<sup>17</sup>.

Of the seniors surveyed in this study, using dental prosthesis, 40% complain of discomfort, 60% have already changed the prosthesis, 22% have had problems speaking, 53% have had difficulty in feeding and 44% feel constrained by having to make use of dentures, which they believe infers in the quality loss of life caused in part by the use of low-quality prostheses.

Along with aging, changes appear on the oral mucosa, such as loss of elasticity, atrophy and dry mouth, with a decrease in salivary flow. These changes complicate the adjustment of dentures, moreover, when they are poorly adapted, may damage the oral mucosa.

Access to oral health services is an insertion of the elderly in activities in their community, as well as a restorative element of self-esteem and improved quality of life.

Although studies have found that older people with dental prosthesis show little interest in health promotion or disease prevention activities, perhaps because they understand that there is nothing more to be done, it is important to say that dental care given in an appropriate manner, with recovery educational actions can make a difference in quality of life<sup>19</sup>.

Change depends on breaking prejudices already rooted in the community. Thus, it is expected that strategies such as the Family Health, which is close to the population, to direct efforts for comprehensive health care, performing partnerships with local health managers, to produce health in a more humane way, with investments in continuing education in the search for quality care of professionals and adoption, by the population, of habits and healthy behaviors<sup>10</sup>.

It should be noted that even with advanced age, motivated individuals have the capacity to learn, requiring incentives and guidance. It is interesting the preparation of monitoring programs for elderly patients with dental prosthesis in order to encourage the use and

maintenance with proposal to improve the quality of oral health and self-esteem<sup>19</sup>.

Thus, we must consider the need that the elderly have for attention and information on oral health, even after the loss of teeth and the placement of the prosthesis. It is important to consider that changes in the oral cavity are constant and the prostheses do not follow these changes and are made of inelastic material, which implies a need for maintenance or periodic exchanges at the discretion of the oral health team professionals.

## CONCLUSION

This study is limited by the fact that it was developed in only a team of a health unit of the family, but it may reflect the Brazilian reality.

Most of individuals surveyed have dentures in poor condition (70.1%), ages ranging 60|-70 years old (71.9%), incomplete primary education (64.1%), earn a minimum wage (58.5%) and have prostheses 20|-40 years (49.7%). They perform proper hygiene (27.5%), 40.0% complain of discomfort, 60.0% have already witted prosthesis and among individuals who cited discomfort to the use of dental prosthesis, 75.0% did not receive any explanation for the problem at the moment they put the prosthesis and nor later. The use of prostheses without adaptation, or causing discomfort affects the quality of life for seniors.

## REFERENCES

1. Ministério da Saúde (Br). Lei Federal nº 10.741, de 1º de outubro de 2003 [Internet]. Dispõe sobre o Estatuto do Idoso e dá outras providências. D.O.U., 3 out 2003 [acesso em 14 mar 2014]. Disponível em: [http://www.planalto.gov.br/ccivil\\_03/leis/2003/110.741.htm](http://www.planalto.gov.br/ccivil_03/leis/2003/110.741.htm).
2. Ministério da Saúde (Br). Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Projeto Saúde Bucal Brasil 2003: condição de saúde bucal da população brasileira 2002-2003 – Resultados principais. Brasília: Ministério da Saúde;

2004. (Série C. Projetos, Programas e Relatórios).
3. Ministério da Saúde (Br). Projeto SB Brasil 2010: condições de saúde bucal da população brasileira 2010: resultados principais [Internet]. Brasília: Ministério da Saúde; 2010 [acesso em 14 mar 2014]. Disponível em: <http://www.saude.gov.br/bucal>.
4. Munhoz EGA, Abreu CW. Os fatores que influenciam na satisfação do paciente submetido a tratamento de prótese total convencional. *HU Rev.* 2011; 37(4):413-9.
5. Silveira Neto N, Luft LR, Trentin MS, Silva OS. Condições de saúde bucal do idoso: revisão de literatura. *RBCEH.* 2007; 4(1):48-56.
6. Stecca E. Avaliação do grau de satisfação da retenção e da estabilidade de próteses totais convencionais [dissertação]. Rio de Janeiro: Faculdade de Odontologia, Universidade Veiga de Almeida; 2007.
7. Chaimowicz F, Barcelos EM, Madureira MDS, Ribeiro MTF. Saúde do idoso. Belo Horizonte: Nescon/UFMG, Coopmed; 2009. 172p.
8. Furtado DG, Forte FDS, Leite DFBM. Uso e necessidade de próteses em idosos: reflexos na qualidade de vida. *Rev Bras Ciênc Saúde.* 2011; 15(2):183-90.
9. Maruch AO, Ferreira EF, Vargas AMD, Pedroso MAG, Ribeiro MTF. Impacto da prótese dentária total removível na qualidade de vida de idosos em grupos de convivência de Belo Horizonte. *Arq Odontol.* 2009; 45(2): 73-80.
10. Silva DD, Held RB, Torres SVS, Sousa MLR, Neri AL, Antunes JLF. Autopercepção da saúde bucal em idosos e fatores associados em Campinas, SP. *Rev Saúde Pública.* 2011; 45(6):1145-53.
11. Mello ALSF, Moysés SJ, Castro RG. Cuidado dirigido à saúde bucal: significados atribuídos por cuidadores de idosos. *Ciênc Cuid Saúde.* 2009; 8(1):27-33.
12. Fenlon MR, Sherriff M. Investigation of new complete denture quality and patients' satisfaction with and use of dentures after two years. *J Dent.* 2004; 32(4):327-33.
13. Savolainen J, Suominen-Taipale AL, Hausen H, Harju P, Uutela A, Martelin T, et al. Sense of coherence as a determinant of the oral health-related quality of life: a national study in finnish adults. *Eur J Oral Sci.* 2005; 113(2):121-7.
14. Osterberg T, Johanson C, Sundh V, Steen B, Birkhed D. Secular trends of dental status in five 70-year-old cohorts between 1971 and 2001. *Communty Dent Oral Epidemiol.* 2006; 34(6):446-54.
15. Hassel AJ, Koke U, Schmitter M, Rammelsberg P. Factors associated with oral health-related quality of life in institutionalized elderly. *Acta Odontol Scand.* 2006; 64(1):9-15.
16. Campos CC, Faria HP, Santos MA. Planejamento e avaliação das ações em saúde. 2ed. Belo Horizonte, Nescon/UFMG:Coopmed; 2010. 114p.
17. Carli JPD, Carli JPD, Giaretta BM, Vieira RR, Linden MSS, Ghizoni JS, Pereira JR. Lesões bucais relacionadas ao uso de próteses dentárias removíveis. *Salusvitas.* 2013; 32(1):103-15.
18. Gonçalves LFF, Silva Neto DRS, Bonan RF, Carlo HL, Batista AUD. Higienização de próteses totais e parciais removíveis. *Rev Bras Ciênc Saúde.* 2011; 15(1):87-94.
19. Guimarães MB, Rocha FR, Bueno RS, Blaya MBG, Hirakata LM. Impacto do uso de próteses dentárias totais na qualidade de vida de idosos. *Rev Bras Qual Vida.* 2011; 5(1):31-8.

#### CONTRIBUTIONS

All authors have equal contributions in the research development and on the preparation of the article in its different phases.