

Self-perceived oral health assessment of institutionalized elderly of Viseu.

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Abstract

Background: Self-perception of oral health is a multidimensional measure that, reflects the subjective experience of individuals about their physical and psychosocial well-being, determines the search for prevention and dental treatments.

Objective: The assessment of the self-perception of oral health status of institutionalized elderly through the Geriatric Oral Health Assessment Index (GOHAI) and the verification of the association between the GOHAI and the various socio-demographic variables and oral health behaviors analyzed.

Participants and methods: With this study we intended to conduct a cross-sectional observational epidemiological study with institutionalized elderly. Data were collected from a sample of 56 institutionalized elderly of the Mariana Seixas Foundation and the Viscondessa São Caetano Nursing Home in Viseu, Portugal. For this we used a questionnaire that allows to evaluate the self-perception of oral health, the Geriatric Oral Health Assessment Index (GOHAI).

Results: It was found that the elderly generally favorably assessed their oral health, with 42.9% of the participants having a high self-perception of their oral health (values between 34-36); 28.6% have a moderate perception (values between 30-33) and the same percentage of individuals (28.6%) have a low perception (values below 30) of their oral health. The GOHAI scores obtained are associated with gender, educational level and oral health behaviors.

Conclusion: Literacy can influence the level of self-perception of oral health. Therefore, the development of measures to assess oral health status is essential for the evolution of scientific knowledge based on geriatric dentistry in order to determine oral health promotion strategies among the institutionalized elderly.

Keywords: Oral health, Elderly, GOHAI, Health promotion.

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Introduction

In the last century, mortality rates declined markedly during the last century, causing a considerable increase among the average life expectancy of the human population. Increased life expectancy is one of the greatest achievements of mankind. The medical and scientific communities have as primary objective the continuous maintenance of the quality of life of the elderly [1]. Thus, there is an increased incidence of disorders that last for years, with a need for care, treatment and constant medication. This situation is directly associated with aging and therefore, a challenge for both the senior citizen and the family, reflecting an increased burden on health systems and specialized units in the comprehensive care of these patients [2].

Oral health is an integral part of overall health, well-being and quality of life. There are several prevalent oral conditions in the geriatric patient: dentition status changes, root caries, periodontal support loss and tooth loss affecting the functional and aesthetic levels. Conditions related to the use of prosthesis, oral lesions, xerostomia, pain and craniofacial discomfort are also considered frequent complications in the elderly that decrease the quality of life of patients and should be efficiently

diagnosed and treated [3]. Among the elderly, there are changes in oral health, both qualitative and quantitative [4].

Self-perception of oral health is a multidimensional measure that reflects the subjective experience of individuals about their physical and psychosocial well-being, determines the search for prevention and dental treatments [5]. The idea that deterioration in oral health is common in the elderly population is often accepted and an effort should therefore be made to counteract this cultural manner. Thus, it becomes an evident need to develop educational and preventive actions for this population, increasing the quality of life and minimizing the deficiencies in relation to oral health [6]. Within the senior population, individuals from disadvantaged or institutionalized socio-economic strata may present an increased risk of oral disease development by the fact that there is an association with the presence of a weak general health or some degree of functional limitation [7].

The main objectives of this study consists in the assessment of self-perception of oral health status of institutionalized elderly through the Geriatric Oral Health Assessment Index (GOHAI) and the verification of an association between the GOHAI and

the various socio-demographic variables and oral health behaviors analyzed.

Participants and Methods

With this study we intended to conduct a cross-sectional observational epidemiological study among institutionalized elderly. Data was collected from a sample of 56 institutionalized individuals of the Mariana Seixas Foundation and the Viscondessa São Caetano Nursing Home, both in the city of Viseu, Portugal between January, 2017 and April, 2017.

For data collection, we used a questionnaire that allows to assess the self-perception of oral health, the Geriatric Oral Health Assessment Index (GOHAI). This questionnaire was developed specifically for the elderly population, intended to give an insight into the functioning ability of an individual throughout their routine and how they understand all their well-being, thus improving the clinical decision and providing better oral health care [8]. The GOHAI questionnaire consists of 12 questions related to the influence of oral health problems on the physical, psychosocial dimensions and pain or discomfort. This type of questionnaire uses the frequency scale with the 3 categories of “always”, “sometimes” and “never”, with values of 1, 2 and 3, respectively.

To obtain the final index, the values are summed on a 12-36 scale that classifies self-perception as “high” (34 to 36 points), “moderate” (30 to 33 points) and “low” (<30 points). With this analysis we were able to relate the psychosocial components of both groups with other factors such as oral hygiene, food, medication and their gerodontological characteristics. The statistical analysis was performed with the SPSS software version 23.0® (IBM Corporation, New York, USA). Absolute and relative frequencies were applied in the analysis of quantitative variables. To analyze the associations between variables, the independence Chi-square and Fisher's exact tests were applied, where the level of significance was 0.05.

Results

The sample subjects in this study were on average 79 years old. Most, (58.9%) were over 80 years old; the minority, (8.9%) were between 40-60 years old; 32.1% included ages 61-79 years. 67.9% of the sample was female and 32.1% of the male gender. All participants were retired; 28.6% did not attend school and cannot read or write; 3.6% did not attend school, but can read and write; 23.2% did not complete the 4th grade; 39.3% completed the 4th grade; while only 1.8% completed higher education. Considering the residence area, 76.8% of the individuals lived in an urban environment while 23.2% had lived, before going to the nursing home, in a rural environment.

Regarding the number of toothbrushes per day: 16.1% did not toothbrush daily, 46.4% toothbrush at least once a day; 21.4% referred tooth brushing twice a day and 16.1% toothbrush more than twice a day. The majority of the study subjects (94.6%) did not use dental floss to complement their oral hygiene, while only 5.4% used it sometimes. Of the total sample, 41.1%

of the elderly who participated in the study did not have a dental prosthesis.

In the application of the GOHAI questionnaire, it was found that the elderly generally favorably assessed their oral health, with 42.9% of the participants having a high self-perception of their oral health (values between 34-36); 28.6% have a moderate perception (values between 30-33) and the same percentage of individuals (28.6%) have a low perception (values below 30) of their oral health.

Comparing the oral health index with the age of the participants (40-60 years; 51-79 years; ≥ 80 years), it was concluded that 68.8% of the individuals who had a low perception of their oral health had an age equal to or above over 80 years. The pattern is maintained in the elderly group with moderate oral health oversight, where 75.0% are 80 years or older. Of the elderly who have a high self-perception of oral health, the majority (50.0%) is between 61 and 79 years old.

Comparing the GOHAI with gender (male or female), it was possible to verify that females have the highest self-perception (value >33). Therefore, the majority of older females have a high self-perception of their oral health while males have the same percentage of elderly with high and low self-perception ($p=0.042$).

Comparing the GOHAI index with the educational level, it can be verified that 62.5% of the elderly who had low self-perception of their oral health completed until the 4th grade. However, 33.3% of the elderly with a high level of oral health self-perception cannot read or write. Comparing the GOHAI index with the variable residence area (urban or rural), it can be concluded that 70.8% of the elderly with high self-perception live in urban areas ($p=0.03$).

Comparing the variable number of toothbrushes per day (none, once a day, twice a day, more than twice a day) with the value obtained from GOHAI, it can be concluded that 41.7% of the elderly who had a high self-perception of their oral health only toothbrush once a day while 43.8% of the elderly who had a low level of self-perception (values <30) claimed to brush their teeth twice a day ($p=0.037$).

Regarding the use of dental floss, it was found that the elderly with low self-perception did not use dental floss (100%). In addition, 87.5% of people who had high self-perception reported not using the dental floss equally.

Comparing the variable use of dental prosthesis with the value obtained in GOHAI, it can be concluded that 54.2% of the elderly who had a high self-perception of their oral health do not have dental prosthesis. This is in contrast with the 81.3% of the elderly who have a low perception of oral health and who have a dental prosthesis ($p=0.04$).

Discussion

According to the results of the GOHAI questionnaire it was found that 42.9% of individuals had a high self-perception of their oral health (values above 33), 28.6% had a moderate self-perception (values between 30-33) and 28.6% a low self-

perception (values less than 30). These values are different from those found in studies conducted in Mexico, where most of the population studied had a low self-perception index of the GOHAI questionnaire [9].

The average of GOHAI values in this study was 33 which suggests a high self-perception of the oral health of the study population, similar to what is referred in other studies conducted in China and Japan [10,11].

Comparing the oral health index with gender (male or female), it was possible to verify that females have the highest self-perception (value >33), in agreement with the data obtained in studies conducted by Palácios et al. [9]. In contrast, studies developed by Locker & Slade reveal that the gender with the lowest self-perception index is the female [12]. This suggests that gender-related sociocultural characteristics may be determinants of individuals' lifestyles in relation to oral health, function and aesthetics [9,12].

Considering the individuals who have dental prostheses, the majority have low perception of oral health, while the individuals who do not have dental prosthesis, the majority have high perception of oral health. We can then assess that the use of prosthesis can negatively influence the perception that individuals have of their oral health, and this is clearly verified among the elderly. In Portugal, the idea that there is a relation between aging and tooth loss is still, unfortunately, in terms of culture and among society, a reality.

It is concluded that, of the elderly who have the lowest level of literacy (cannot read or write), most have a high perception of their oral health, while the elderly who completed at least the 4th grade of school, most have a low perception of their oral health, which may reveal that these elderly have a more acceptable reality of their true oral health condition.

The data resulted of the present study is similar to those demonstrated in other studies, for example by Locker & Slade, which associates low educational level attainment with the poor perception of oral health [12].

Among the limitations that may be pointed out in this study is the limited number of elderly individuals in the sample, as well as the predominance of females and those aged 80 years or older. We recommend further studies using a larger sample, with an equal percentage of older men and women from both residence areas, as well as coming from different contexts to confirm the results obtained in this study.

Conclusion

The elderly is one of the age groups most vulnerable to the emergence of problems in the oral cavity and consequent low quality of life. Indexes such as GOHAI have been very useful for understanding the true perception of health characteristics of the own individual. Literacy can also influence the level of self-perception of oral health, concluding that of the elderly who have the lowest levels of education (cannot read or write), most have a high perception of their oral health.

It should also be noted that the use of prosthesis can negatively influence the perception that individuals have of their oral health. Therefore, the development of measures to assess oral health status is essential for the evolution of scientific knowledge based on geriatric dentistry in order to determine oral health promotion strategies among the institutionalized elderly.

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