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Association between resilience and quality of life related to oral health in the elderly

Associação entre resiliência e qualidade de vida relacionada à saúde bucal em idosos

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ABSTRACT: *Objective:* To evaluate the association between psychological resilience and oral health related to quality of life through a hierarchical approach based on a conceptual theoretical model in a cohort of elderly residents in Rio Grande do Sul, Brazil. *Methods:* We conducted a cross-sectional study nested in a cohort study in 2008. We evaluated 498 elderly residents in Carlos Barbosa, Rio Grande do Sul. The measures included sociodemographic questionnaire, health behavior, quality of life related to oral health (OHRQOL), measured by the Oral Health Impact Profile (OHIP-14), Resilience Scale, and DMFT. The association between resilience and potential impacts on perceptions of oral health-related quality of life was assessed through negative binomial regression. Mean ratios (MR) are presented with 95% confidence intervals (95%CI). *Results:* Higher means of OHIP were found in women 6.7 ± 6.3; p = 0.011), in rural dwellers (7.3 ± 6.7; p = 0.004) and singles (8.0 ± 6.3; p = 0.032). The final model of multivariate analysis showed that being a rural dweller (MR = 1.32; 95%CI 1.06 – 1.65) and being married (MR = 1.36; 95%CI 1.07 – 1.72) were independently associated with OHRQOL. There was no association between resilience and OHRQOL. *Conclusion:* The results suggest that factors such as sociodemographic variables are associated with OHRQOL. The hypothesis that resilience might play a role in the outcome has not been confirmed.

Keywords: Aged. Aging. Resilience, psychological. Oral Health, Quality of life. Oral health. Epidemiology.

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RESUMO: *Objetivo:* Estimar a prevalência de dor crônica e sua associação com a situação socioeconômica, demográfica e atividade física no lazer em idosos. *Métodos:* Este estudo é parte do inquérito epidemiológico e transversal de base populacional e domiciliar EpiFloripa Idoso 2009–2010 realizado com 1.705 idosos (≥ 60 anos), residentes em Florianópolis, Santa Catarina. A partir da resposta afirmativa de dor crônica, foram investigadas as associações com as variáveis obtidas por meio de entrevista estruturada. Realizou-se a estatística descritiva, incluindo cálculos de proporções e intervalos de confiança 95% (IC95%). Na análise bruta e ajustada, empregou-se regressão de Poisson, estimando-se as razões de prevalência, com intervalos de confiança de 95% e valores p ≤ 0,05. *Resultados:* Dentre os idosos investigados, 29,3% (IC95% 26,5 – 32,2) relataram dor crônica. Na análise ajustada, observou-se que as variáveis sexo feminino, menor escolaridade e pior situação econômica ficaram associadas significativamente com maior prevalência de dor crônica; ser fisicamente ativo no lazer ficou associado significativamente com menor prevalência do desfecho. *Conclusões:* Percebe-se que a dor crônica é um agravo que acomete considerável parcela de idosos, havendo desigualdades sociais na sua frequência e sendo beneficamente afetada pela atividade física no lazer. É necessário que políticas públicas de saúde subsidiem programas multidisciplinares de controle da dor incluindo a prática regular de atividade física, voltada especificamente à promoção da saúde do idoso, evitando assim que a dor crônica comprometa a qualidade de vida desta população.

Palavras-chave: Prevalência. Dor crônica. Fatores socioeconômicos. Atividade motora. Idoso. Estudos transversais.

INTRODUCTION

The world population has been aging fastly. In developing countries, like Brazil, where the statute of the elderly[1] establishes the age of 60 or more for a person to be considered as an elder, that is not different. The country is experiencing a differentiated epidemiological transition[2], in which communicable diseases reappear while health expenses with chronic degenerative diseases increase significantly[3]. The oral health of this part of the population is precarious and characterized by extensive dental loss[4]. This scenario can influence the quality of life of these people.

Quality of life is a multidimensional term[5]; therefore, it should be studied by considering a series of factors that can influence its perception. Clinical conditions and health problems can have an impact on quality of life, but other things should be considered[6]. We can also define oral health-related quality of life as "the absence of negative impacts of oral condition on social life and a positive sense of self-confidence regarding the oral condition"[7].

One of the factors that can influence the perception individuals have regarding the impact of oral health conditions on their quality of life is resilience. In psychology, such a

term is intimately connected with the way people behave toward adversities, as well as their ability to return to "normal" in spite of them[8]. The term was originated in studies involving children; in the past few years, however, the theme was expanded to other segments of the population, and the elderly group was very appropriate for these investigations.

In the past decades, some studies were conducted with the objective of assessing the oral health-related quality of life[9] and resilience[10-12]. However, we are not familiar with studies that assess the oral health-related quality of life and resilience among the elderly, working as a protective factor regarding the impacts produced by poor oral health.

This study aims at assessing the association between resilience and oral health-related quality of life by a hierarchical approach based on the conceptual theoretical model of oral health outcomes proposed by Andersen and Davidson[13]. The hypothesis of the study is that more resilient elderly people can adjust more easily to losses related to oral health; therefore, their quality of life is less impacted in terms of oral health.

METHODS

STUDY DESIGN

This is a cross-sectional study nested in a cohort study.

POPULATION AND SAMPLE

A simple random sample was conducted with a population of independent elderly people in the city of Carlos Barbosa. The base study was conducted in 2004, and the first follow-up took place in 2008. Carlos Barbosa is located 104 km from Porto Alegre, capital of Rio Grande do Sul, in the south region of Brazil; its municipal human development index (HDI) in 2010 was of 0.796. Since it was colonized by Italians, its population is mostly composed of white people and, in 2008, there were approximately 25,388 inhabitants, 2,167 aged 60 years old or more[14].

In the base line, 872 elderly people were assessed during the second semester of 2004[15]. In 2008, in the cross-sectional study that was part of the follow-up stage, a consecutive sample of the participants was evaluated until there were 498 people, which is equivalent to the necessary sampling calculation to carry out the study that originated this one; it focused on the relationship between relisience and health self-perception[11]. The calculation was based on a pilot study composed of 50 individuals who presented 0.67 prevalence of low resilience potential and good oral health self-perception, and 0.75 prevalence of high resilience potential and good oral health perception. A 95% confidence interval (95%CI) was considered, admitting a β error of 20% and consecutive 80% statistical power.

MEASUREMENTS

The information in this study was collected during the 2008 follow-up, being approved by the Research Ethics Committee of Universidade Federal do Rio Grande do Sul. After a new contact with the participants, when they agreed to participate in the study again, they were informed about the objectives and procedures to be conducted; afterwards, they were asked to sign the informed consent form.

DATA COLLECTION

Collection was conducted by interviews and clinical examinations, by using instruments and methodology according to criteria by the World Health Organization (WHO)[16]; these were also reference for training examiners. Interviewes were conducted in the households or in neighborhood associations, and clinical examinations were carried out in dental clinics of Basic Health Units in the city, using artificial light.

INSTRUMENTS

1) Sociodemographic and health questionnaire
   Sociodemographic and behavioral aspects included: age (in years, categorized as 60 – 64, 65 – 69, 70 – 74, 75 – 80 and older than 80), sex, location of the household (urban or rural zone), marital status (categorized as married, widower/separated and single), schooling (in years, categorized as incomplete elementary school, complete elementary school and high school and higher education) and monthly family income. There was also a question about participation in groups of elderly people: "Are you part of any group of elders in your community or of the meetings of the elderly from yours or another community?". Dental history was also self-reported with questions about the last visit to the dentist and the reason for the appointment, besides habits such as smoking (current smoker, categorized in yes or no) and oral hygiene self-care, with the question: "How often do you brush your teeth?" (≤ once a day, twice a day and ≥ 3 x day).

   1.1) *Oral Health Impact Profile* (OHIP-14)
      This instrument was carried out by Slade and Spencer[17], and its objective is to provide a wide measurement of the dysfunction, discomfort and inability attributed to oral condition. The questionnaire is constituted of 14 items, usually assessed by a single score. The responses are part of a Likert-type scale, with 5 options ranging from "never" (0) to "always" (4). In the original study, the author presents an average of 7.68 for the studied sample. An initial sample was conducted for this study, and OHIP was categorized as: "0" and ">0", with median score evaluation. In the multivariate analysis, scores were considered as discrete variables.

1.2) Resilience scale

The resilience scale (RS) was developed by Wagnild and Young[12]. This scale has 25 items with Likert-type responses, with 7 points, ranging from "totally disagree" (1) to "totally agree" (7). RS scores range from 25 to 175 points. In the original study, the average value of participants was of 146. The sum of points creates a score, which, in this study, was categorized according to the author of the scale[12,18]: ≤ 124: low; 125 – 145: mean; and > 145: high.

2) Oral examinations

The clinical oral examination was conducted in 2004 and 2008, by using the CPOD index. In both collections, two previously trained and calibrated post-graduate students of dentistry performed the tests according to the criteria established by WHO for oral health epidemiological surveys[16]. The sum of teeth classified as being lost after the dental clinical examination was used to calculate the number of teeth lost per participant. The difference between both examinations resulted in the number of lost teeth. The number of teeth was counted in 2008 and categorized according to the reduced dental arch (≥ 20 teeth, 1 – 19 teeth and zero tooth), considering 20 teeth as being acceptable from a functional point of view[16].

CONCEPTUAL THEORETICAL MODEL

The behavioral model used in this study is an adaptation of the model proposed by Andersen and Davidson[13]. As described in Figure 1, the modified model conceptualizes exogenous variables (age and sex) as distal variables located in the 1st block of analysis. In the 2nd block, as intermediate variables, it is possible to find primary determinants, represented by the external environmental and personal characteristics. The external environment is characterized by the location of the household where the elderly person lives. Personal characteristics were: marital status, resilience potential and available resources (schooling, income and participation in elderly groups). The intermediate variables in the 3rd block were health-related behaviors: smoking and toothbrushing frequency and visits to the dentist. In the proximal block, that is, the 4th block, it was possible to observe current oral health conditions: tooth loss in the past four years and number of teeth. The study outcome was oral health-related quality of life.

STATISTICAL ANALYSIS

Data were described by using the simple and absolute frequencies for qualitative and mean variables, and standard-deviation (SD) for quantitative variables. A bivariate analysis was conducted by the χ^2 and the Mann-Whitney test. Univariate and multivariate analyses were conducted by generalized linear models for discrete variables. Negative binomial regression models were calculated. Mean ratios (MR) are presented with their 95%CI.
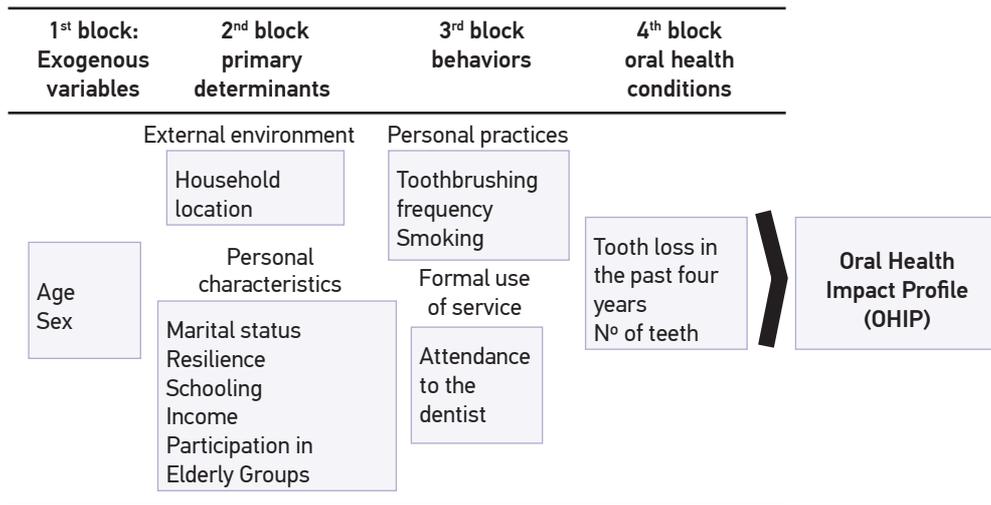
Figure 1. Conceptual theoretical model.

The presence of overdispersion was confirmed in preliminary analyses, and modeling was in accordance with the guidelines described by Hardin and Hilbe[19].

The variables that remained statistically significant inside each block (p < 0.25) were used in the final model. The adjustment of the final model, in comparison to models in each of the proposed blocks, was assessed according to the Baysean Information Criteria, and was used in the final model. The adjustment of the final model, in comparison to the modela in each of the proposed blocks, was assessed according to the Baysean Information criteria and pseudo-R^2. The presence of outliers and triggering potential of the models were analyzed in the final model. Terms of interaction between resilience and covariation were tested. Statistical analysis was conducted with the software STATA, version 11.2 (StataCorp, College Station, TX).

RESULTS

The studied sample presented mean age of 70.95 ($\pm$ 6.59) years old. Most of the sample was composed of women (66.87%), who lived in the urban area (53.21%) and were married (64.06%). The mean score of RS was of 141.06 ($\pm$ 13.30). Besides, 45.92% did not finish elementary school, and 60.45% participated in elderly groups. Most participants (58.43%) reported looking for a dental surgeon only because of oral related problems, and the mean CPOD was 27.28 (4.89). The intra and inter-examiner Kappa coefficient to assess the CPOD index before and during the study in 2004 was of 0.97 and 0.94; in 2008, it was 0.98 and 0.97. The Cronbach's a coeficiente of the RS was of 0.71 (lower interval of 0.68), while for OHIP it was of 0.82 (lower interval of 0.80).

Among individuals who presented OHIP sum score = 0, there was no significant difference between variables. On the other hand, the OHIP mean was significantly higher among women (6.7 ± 6.3), those living in the rural zone (7.3 ± 6.7) and single people (8.0 ± 6.3) (Table 1).

There was no association between the variables composing the 1st block: age and sex with outcome. In the 2nd block, the household location (rural) presented aMR (adjusted) of 1.37 (95%CI 1.11 – 1.79) (Table 2).

With regard to personal characteristics, resilience was not associated, unlike marital status. Married elderly people, when compared to widowers/separated ones, presented aMR of 1.30 (95%CI 1.06 – 1.60). Schooling, income and participation in elderly groups were not statistically significant, as well as variables of behavior and oral health conditions (third and fourth blocks) (Table 2).

No term of interaction between resilience and the variables in any block was significant (p > 0.05), indicating that this variable (resilience) does not change the effect of the others.

For the totally adjusted model, only the variables referring to the external environment, which formed the 2nd block (distal determinants), presented statistically significant differences. People living in the rural zone presented aMR of 1.32 (95%CI 1.06 – 1.65), and married ones, aMR of 1.36 (95%CI 1.07 – 1.72), when related with widowers/separated people (Table 3).

DISCUSSION

In this study, exogenous variables and primary determinants, in the most distal position of the model, have been associated with more impacts on oral health-related quality of life, while intermediate ones, related to health behaviors, and proximal variables, such as oral health conditions, had no statistical significance. However, among primary determinants, as a multidimensional construct, resilience did not present statistical significance when assessed in a hierarchical model, thus rejecting our initial hypothesis.

Marital status is an important health determinant and is strongly associated with many mental health outcomes. Married people have lower levels of depression, anxiety and psychological stress than single people[20]. Besides, living without a partner is usually related to the report of poorer quality of life[21]. Our results demonstrate that married people, when compared to separated ones/widowers, report more impact of oral health-related quality of life. That can be related to the presence of a partner, which determines more self-esteem, and to the possibility of increasing the importance of determinant health factors and their behaviors and subjective perceptions. Studies about changing marital status, especially from married to separated people or widowers, point out to increasing prevalence of mental, physical, chronic and acute diseases[22].

Table 1. Description of the studied variables with regard to the Oral Health Impact Profile.

	OHIP = 0 n (%)	p-value	OHIP Mean ± SD	p-value
Age (in years)				
60 – 65	105 (10.48)		7.9 ± 7.2	
66 – 70	149 (14.09)		5.8 ± 6.1	
71 – 75	128 (13.28)	0.074	6.2 ± 6.0	0.082
76 – 80	70 (22.86)		6.1 ± 7.3	
≥ 81	40 (5.00)		5.6 ± 4.2	
Sex				
Male	162 (17.90)	0.052	5.8 ± 6.5	0.011
Female	330 (11.52)		6.7 ± 6.3	
Household location				
Urban	264 (14.02)	0.078	5.6± 6.0	< 0.01
Rural	228 (13.16)		7.3 ± 6.7	
Marital status				
Married	315 (13.97)		6.9 ± 7.0	
Widower/separated	142 (13.38)	0.276	5.1 ± 4.8	0.032
Single	29 (3.45)		8.0 ± 6.3	
Resilience				
< 125	37 (10.81)	0.604	5.4 ± 4.6	
125 – 145	275 (12.73)		6.7 ± 6.2	0.145
> 145	180 (15.56)		6.1 ± 6.9	
Schooling				
Incomplete elementar school	222 (14.41)		6.0 ± 5.9	
Complete elementar school	191 (11.52)	0.620	6.4 ± 6.6	0.783
High school to higher education	73 (15.07)		7.3 ± 7.3	
Income				
0 – 1 MW	249 (15.66)		7.0 ± 6.9	
1 – 2 MW	191 (11.52)	0.358	5.6 ± 5.4	0.152
> 2 MW	92 (10.87)		5.9 ± 6.4	
Participation in groups				
Yes	296 (14.86)	0.343	6.3 ± 6.6	0.798
No	194 (11.86)		6.3 ± 6.2	
Toothbrushing frequency				
≤ once a day	96 (10.42)		6.6 ± 6.1	
Twice a day	204 (15.69)	0.448	6.1 ± 6.3	0.655
≥ 3 x a day	190 (13.16)		6.4 ± 6.6	
Smoking				
Yes	27 (14.81)	0.859	5.2 ± 5.1	0.314
No	463 (13.61)		6.5 ± 6.5	
Access to dental care				
Never	142 (14.08)		5.5 ± 6.0	
If there is a problem	289 (12.11)	0.320	6.7 ± 6.3	0.257
Occasionally	20 (20.00)		6.0 ± 5.6	
Regularly	36 (22.22)		7.3 ± 8.6	
Tooth extraction in the past four years (2004 – 2008)				
None	334 (14.67)		5.8 ± 7.0	
1 tooth	56 (9.43)	0.587	6.0 ± 6.1	0.405
> 1 tooth	61 (14.75)		6.7 ± 6.4	
Number of teeth in 2008				
No teeth	265 (13.21)		6.2 ± 6.4	
From 1 to 19 teeth	72 (18.06)	0.403	7.4 ± 7.1	0.131
≥ 20 teeth	148 (11.49)		6.1 ± 6.9	

OHIP: *Oral Health Impact Profile*; SD: standard deviation; MW: minimum wage.

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Table 2. Mean ratio and 95% confidence intervals in each block.

1st block	Crude MR	95%CI	MR[a]	95%CI
Age	0.99	0.97 – 1.00	0.99	0,97 – 1,00
Sex				
Male	1			
Female	1.16	0.96 – 1.41	1.14	0,94 – 1,38
2nd block	**Crude MR**	**95%CI**	**MR[b]**	**95%CI**
Resilience				
< 125	1			
125 – 145	1.00	0.99 – 1.01	1.00	0,99 – 1,01
>145	0.99	0.98 – 1.01	0.99	0,98 – 1,00
Household locatio				
Incomplete elementary school	1			
Complete elementary school	1.30	1.08 – 1.55	1.37	1,11 – 1,70
Marital status				
Widower/separated	1			
Married	1.34	1.09 – 1.64	1.30	1,06 – 1,63
Single	1.57	1.05 – 2.34	1.38	0,92 – 2,08
Participation in elderly groups				
No	1			
Yes	1.00	0.83 – 1.21	0.88	0,71 – 1,09
Schooling				
Incomplete elementary school	1			
Complete elementary school	1.06	0.87 – 1.29	1.06	0,87 – 1,29
> Elementary school	1.20	0.92 – 1.58	1.12	0,85 – 1,47
Monthly income (in minimum wages)	0.93	0.85 – 1.01	0.94	0,87 – 1,03
3rd block	**Bruta MR**	**95%CI**	**MR[c]**	**95%CI**
Smoking				
Yes	1			
No	1.24	0.83 – 1.87	1.22	0,81 – 1,83
Toothbrushing frequency				
≥ 3 X day	1			
Twice a day	0.95	0.78 – 1.17	0.96	0,81 – 1,83
≤ Once a day	1.03	0.80 – 1.32	1.02	0,79 – 1,32
Access to dental care				
Never	1			
When in pain	1.22	0.99 – 1.51	1.23	1,00 – 1,52
Occasionally	1.09	0.67 – 1.77	1.08	0,66 – 1,76
Regularly	1.33	0.91 – 1.93	1.31	0,90 – 1,92
4th block	**Bruta MR**	**95%CI**	**MR[d]**	**95%CI**
Incidence of tooth loss 2004 – 2008	1,04	0.99 – 1.10	1.04	0.99 – 1.10
Missing teeth in 2008	1,02	1.00 – 1.03	1.02	1.00 – 1.03

MR: mean ratio; [a]Adjusted associations for the variables in block 1: pseudo-R^2 = 0.2%,
Ben-Akiva adjusted pseudo-R2= 0.0% and BIC = 2896.407; [b]Adjusted associations for the variables in block 2:
pseudo-R^2 = 0.8%, Ben-Akiva adjusted pseudo-R2 = 0.0% and BIC = 2832.295; [c]Adjusted associations for the variables
in block 3: pseudo-R^2 = 0.2%, Ben-Akiva adjusted pseudo-R2 = 0.0% and BIC = 2863.526; [d]Adjusted associations for the
variables in block 4: pseudo-R^2 = 0.3%, Ben-Akiva adjusted pseudo-R2 = 0.0% and BIC = 2651.652.

According to literature, the daily use of health services is less frequent among people living in rural zones[23], which seems to be explained by the lack of access and the fewer resources; these range from health care itself to water fluoridation[24]. These difficulties may be related to unfavorable oral health, which increases the impacts on quality of life. Living in the rural zone seems to be a predictor of disadvantages with regard to oral pain and need for prosthesis[25]. However, most studies do not precisely describe the location of the household, so only a few analyze this variable, especially regarding quality of life[26]. The relationship between people who live in rural and urban communities ranges according to the analyzed disease. For Parkinson's disease, for instance, quality of life is better in urban areas[27]; at the same time, for rheumatoid arthritis, this relationship is inverse[28]. Our results show that living in the rural zone presented higher chances of realizing the impacts of oral health on quality of life. This can be related to closeness between known people and to the differences of physical and social environments that determine the life style of these

Table 3. Ratio of means at the final model of the Oral Health Impact Profile.

	Adjusted RM 95%CI
Block 1 (Exogenous variables)	
Age	0.99 (0.98 – 1.01)
Sex	
Male	1
Female	1.14 (0.91 – 1.44)
Block 2 (Distal determinants)	
Household location	
Urban	1
Rural	1.32 (1.06 – 1.65)
Marital status	
Widower/separated	1
Married	1.36 (1.07 – 1.72)
Single	1.41 (0.91 – 1.72)
Participation in elderly groups	
No	1
Yes	0.86 (0.68 – 1.08)
Monthly family income	0.97 (0.88 –1.06)
Block 4 (Clinical health conditions)	
Incidence of tooth loss 2004 – 2008	1.03 (0.98 – 1.09)
Missing teeth in 2008	1.02 (1.00 – 1.03)

RM: ratio of means.

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people. Also, we can relate the peculiar conditions of the rural zone where the study was conducted, which is recognized for having one of the best human development indexes in Brazil. By observing the mean resilience score, which is within patterns observed in literature[11,18], we can think of the possibility that the study participants show a selective survival bias, as reported by Haikal et al.[29].

Studies show that dental variables, such as tooth loss, are associated with worse quality of life[9,30]. Our results present borderline significance, with certain tendency of the elderly with missing teeth reporting the impacts of oral health a little bit more. However, it is worth to question to what point dental loss and the sequels of history of oral health mutilation can be considered as a stress factor for this population. It is known that many elderly people consider their oral health to be good or excellent, despite losses[31], that is, they are adapted to a situation by "activating their resilience potential" by not considering oral health to be an issue; that is, if these impacts do not reflect on their oral health-related quality of life. Culturally, past generations considered tooth loss as something acceptable. Nowadays, in clinical practice, it is still common for elderly patients to prefer tooth loss over the pain that can be caused by a tooth. However, it is worth to mention that the elderly people analyzed in this study lived in a time when tooth loss and poor oral conditions, as well as getting sick, were considered to be part of the "normal aging process"[32].

In a previous study of the group[11], an association was found between having high resilience potential and positive oral health perception, even considering the sample of analyzed elders who had high prevalence of tooth loss. However, possible associations between resilience and quality of life related to oral health were not assessed. This leads us to question what the meaning of resilience in this context is. In case the elderly do not consider their oral health condition to be a stress factor, they may consider that poor oral health is not a problem[31], especially if tooth loss happened a long time ago. Therefore, the lack of association between resilience and oral health-related quality of life may be because usually the study of resilience is based on major events, usually related to grief[33], catastrophes and war combats. We can still assume that the damage caused by tooth loss does not cause major stress because it happens gradually. Besides, since resilience leads to the idea of flexibility and adaptation, its aspects range from being risk to protective factors, depending not only on the presence of conditioning factors, but also on the intensity of such factors[10].

The individual's behavior is bidirectionally conditioned to oral health perception. OHIP is one of the most used instruments to measure the impacts that such a perception can cause on general health, and, as a consequence, on health behaviors. However, it is focused on adversities, therefore not approaching positive oral health aspects. The opposite happens with RS, which practically does not analyze negative aspects. Sociodental indicators based on the International Classification of Impairments, Disabilities and Handicaps (ICIDH), like OHIP, are usually not adapted to the reality

of respondents, because they do not consider the beliefs and behaviors of these people[34]. Besides, health perceptions change all the time, which causes changes in the responses for this type of instrument[30]. When people analyze their own oral condition, they do so accurately, however, using different criteria in comparison to those used by the professional. While the dental surgeon assesses the condition based on the absence of disease, the patient analyzes it based on symptoms and functional and social problems[35].

The homogeneity of the sample can be one limitation for this study, once most participants were White, Italian descendants or even Italian immigrants. Besides, most participants had a dental prosthesis. Finally, we can also understand the cross-sectional design of this study as a limiting factor. We believe further studies are necessary, with larger samples and longitudinal design, in order for causal relations to be fully explored.

FINAL CONSIDERATIONS

The results of this study show that independent elderly people, those living in the rural zone and married people have more impacts on oral health. It is important that potentials and perceptions of people be widely studied so that this knowledge can help the discoveries about what can really promote not only a positive oral health perception, but also self-efficacy and empowerment when it comes to oral health — which are essential aspects of health promotion.

The study hypothesis that more resilient eldelry people can adjust more easily to losses related to oral health, and that they suffer less impacts on oral health-related quality of life, was not confirmed.

From our point of view, this study is the first one that proposes an evaluation between resilience and oral health-related quality of life by considering sociodemographic and behavioral variables of general health. Results indicate the need to understand issues that can involve subjective factors related to oral health, and of how they can influence the quality of life of the elderly, especially by conducting longitudinal studies. The fact that there are differences between oral health perceptions influenced by sociodemographic characteristics can help build a more equanimous paradigm of oral health care, leading to progress concerning the confrontation of differents related to health care in developing countries. In Brazil, care addressed to the elderly did not accompany the growth of this population, and the result is the poor oral health condition. This scenario can influence the quality of life of these people. That is why it is important that we know a bit more about the way this population sees their health problems and solves them, for the development of adequate actions addressed to their social and cultural profile.

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