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ORIGINAL ARTICLE

Do Temporomandibular Disorder and Age Predict Oral Health-Related Quality of Life in Men and Women?

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Highlights

(1) Women consistently reported worse oral health-related quality of life and higher levels of temporomandibular disorder compared to men, indicating a gender disparity in oral health perception. (2) Temporomandibular disorder severity was significantly associated with a decline in oral health-related quality of life, especially among women, underscoring the substantial impact of temporomandibular disorder on individuals' quality of life, particularly in terms of functional limitation and physical disability. (3) While temporomandibular disorder emerged as a significant predictor for both genders, age had differing effects.

ABSTRACT

This study aimed to verify whether temporomandibular disorder (TMD) and age predict oral health-related quality of life (OHRQoL) in both men and women. This is a quantitative, analytical, observational and cross-sectional research. The sample was chosen intentionally and for convenience, and consisted of 407 adults, of both genders, living in different regions of Brazil. A sociodemographic questionnaire was used with questions related to gender, age, education, and income, among others; the Oral Health Impact Profile (OHIP-14) and Fonseca Anamnesic Questionnaire also were used. Data were analyzed by Kolmogorov-Smirnov, Levene, bootstrapping, Student's t, Cohen's d, Pearson's correlation and multiple regression analysis ($p<0.05$). The women perceived themselves as having worse OHRQoL and higher TMD. The increase in TMD score is associated with worsening of OHRQoL, with greater intensity among women. For women, TMD was a positive predictor for all domains and the total OHRQoL score, while age presented a significant and positive prediction only on the domains of functional limitation ($\beta=0.14$), physical disability ($\beta=0.17$) and total score ($\beta=0.10$). For men, TMD was a positive predictor, while age did not present a significant prediction on the domains and the total OHRQoL score. Women perceived themselves as having worse OHRQoL and higher TMD. It is noteworthy that TMD was an intervening factor in the OHRQoL of both men and women, and age can potentiate this influence in women.

Keywords: mandibular diseases; dentistry; health.

A DISFUNÇÃO TEMPOROMANDIBULAR E A IDADE PREDIZEM A QUALIDADE DE VIDA RELACIONADA À SAÚDE ORAL EM HOMENS E MULHERES?

RESUMO

Este estudo teve como objetivo verificar se a disfunção temporomandibular (DTM) e a idade predizem a qualidade de vida relacionada à saúde oral (OHRQoL) em homens e mulheres. Trata-se de uma pesquisa quantitativa, analítica, observacional e transversal. A amostra foi escolhida intencionalmente e por conveniência, composta por 407 adultos de ambos os sexos, residentes em diferentes regiões do Brasil. Foi utilizado um questionário sociodemográfico com questões relacionadas a sexo, idade, escolaridade, renda, entre outras; também foram utilizados o Oral Health Impact Profile (OHIP-14) e o Fonseca Anamnesic Questionnaire. Os dados foram analisados pelos testes Kolmogorov-Smirnov, Levene, bootstrapping, t de Student, d de Cohen, correlação de Pearson e análise de regressão múltipla ($p<0,05$). As mulheres se perceberam como tendo pior OHRQoL e maior prevalência de DTM. O aumento do escore de DTM está associado à piora da OHRQoL, com maior intensidade entre as mulheres. Para as mulheres, a DTM foi um preditor positivo para todos os domínios e para o escore total da OHRQoL, enquanto a idade apresentou predição significativa e positiva apenas nos domínios limitação funcional ($\beta=0,14$), incapacidade física ($\beta=0,17$) e escore total ($\beta=0,10$). Para os homens, a DTM foi um preditor positivo, enquanto a idade não apresentou predição significativa nos domínios e no escore total da OHRQoL. As mulheres se perceberam como tendo pior OHRQoL e maior DTM. Vale ressaltar que a DTM foi um fator interveniente na OHRQoL tanto de homens quanto de mulheres, e a idade pode potencializar essa influência nas mulheres.

Palavras-chave: doenças mandibulares; odontologia; saúde.

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INTRODUCTION

Temporomandibular disorder (TMD) comprises a group of musculoskeletal and neuromuscular conditions that involve the temporomandibular joint (TMJ), masticatory muscles and associated tissues, in a pathological way[1]. TMJ is the anatomical structure responsible for jaw movements[1]. TMD affects 60 to 70% of the population[2].

The etiology of TMD is multifactorial, and may be related to medical, traumatic, dental, genetic and/or psychosocial conditions. The main signs and symptoms involve limitations in mandibular movements, snaps and clicks, muscle pain, head and cervical region pain, in addition to being the main cause of orofacial pain, directly impacting quality of life (QoL)[3].

QoL is related to the subjective perception of the individuals about their position in life, in the context of values and in the culture in which they live, as well as with regard to their goals, expectations and concerns. Patients with chronic pain, including TMD, often have significant changes in QoL[4]. The severity of the signs and symptoms mentioned above correlates with QoL, emotional states and poor sleep quality, and these changes influence clinical and therapeutic management[5].

In the general QoL construct, there are different specific aspects, such as Oral Health-Related Quality of Life (OHRQoL), which is also directly related to TMD signs and symptoms[5]. OHRQoL refers to the impact of oral conditions on an individual's quality of life and well-being, going beyond physical health to include emotional and social aspects. Oral Health-Related Quality of Life (OHRQoL) refers to the impact of oral conditions on an individual's quality of life and well-being, going beyond physical health to include emotional and social aspects[6].

The relationships between TMD clinical variables and OHRQoL results are not direct, but moderated by a diversity of variables, namely by individual/personal (such as gender and age), social or environmental variables. The perception of the oral condition can be influenced by factors such as gender, age, education and income (social class), in addition, functional or psychological problems can be caused by oral diseases, such as TMD[6].

These physical, socioeconomic, demographic and psychosocial factors also seem to have a great influence on the prevalence of TMD. These factors can be represented by gender, educational level, economic class, family income, presence of pain and depression7. Regarding gender, some studies have shown that TMD is more prevalent in females, and the female gender is also considered a predisposing factor for the occurrence of the dysfunction[8,9].

Literature data show that, in relation to age, there is peak prevalence between 35 and 45 years of age and a reduction in younger people and in older ages, that is, in the older adults[10]. However, there is still a gap in the literature regarding the impact of TMD and the age of the subjects on OHRQoL. Knowledge of the health determinants of oral health and QoL of adults is of utmost importance to leverage the definition of risk reduction and health promotion policies.

The study of the impact of TMD and age on OHRQoL is fundamental for clinical practice, as it improves the treatment of patients with TMD, and has important implications for public health, helping to identify groups risk and the development of more effective oral health strategies in different age groups. Therefore, we highlight the need to evaluate the impact of TMD and age on OHRQoL, comparing the genders, so as to determine specific and objective interventions tailored to the needs to promote health, treatment and subsequent therapeutic success in these subjects. Therefore, this study aimed to verify whether TMD and age predict OHRQoL in both men and women.

METHOD

This is a quantitative, analytical, observational and cross-sectional research, approved by the Ethics Committee on Research with Human Beings of Cesumar University through opinion number 4,557,637/2021. We obtained ethical approval to distribute the forms via social media. This approval was a key step in our research efforts and allowed us to collect data ethically and reliably.

Participants

The sample was chosen intentionally and for convenience, consisting of 407 adult people, aged 20 years or older, of both genders, residing in different regions of the country. The persons who completed all questions of the assessment instruments were included.

Subjects were excluded if the data presented filling errors, contradictory answers or significant inconsistencies, in addition to those with medical conditions or factors that affect the evaluation.

Instruments

To characterize the sample, a questionnaire prepared by the authors was used, with questions regarding criteria such as: age, age group, gender, monthly income in minimum wage, education, marital status, self-perception of health, and self-perception of oral health.

To assess OHRQoL, the OHIP-14 questionnaire (Oral Health Impact Profile – 14) was used. The instrument is based on the International Classification of Impairments, Disabilities and Handicaps (ICIDH) developed by the World Health Organization[11], adapted for oral health by Locker[12], and validated in Brazil by Oliveira and Nadanovsky[13]. The instrument allows, in a single administration, to collect information regarding the severity, extent and prevalence of negative impacts on OHRQoL[12,13]. The OHIP-14 is a subjective indicator that aims to provide a measure of disability, discomfort and disadvantage attributed to the oral condition, through self-assessment.

The instrument integrates two questions for each of the seven dimensions: Functional limitation, Physical pain, Psychological discomfort, Physical disability, Psychological disability, Social disability and Disadvantage. The questions of the instrument are organized in such a way that the participants indicate, according to a Likert type scale with five response categories, how often they experience each of the problems, within a reference period of 12 months. The response categories and respective ratings are: Almost always = 4; Sometimes = 3; Few times = 2; Rarely = 1; Never = 0. The final result is obtained by summing the response score of each item of the instrument. Higher scores indicate a poor OHRQoL[12,13].

For TMD assessment, the Fonseca Anamnesic Questionnaire was used, consisting of 10 questions. For each of the questions in the Fonseca Questionnaire, three answers (yes, no and sometimes) are possible for which three scores are pre-established (10, 0 and 5, respectively). With the sum of the points assigned, an anamnesis index is obtained that allows classifying the volunteers into categories of symptom severity: no TMD (0 to 15 points), mild TMD (20 to 45 points), moderate TMD (50 to 65) and severe TMD (70 to 100 points)[14].

The Fonseca Anamnesic Questionnaire was developed according to the Helkimo Anamnesic Index[15] and is one of the few instruments available in Portuguese to characterize the severity of TMD symptoms. The questionnaire was previously tested in TMD patients[14] and demonstrated a 95% correlation with Helkimo's clinical index[15]. Campos et al.[16] inferred the reliability of the questionnaire.

Data collection protocol

The data was collected through an online form made available free of charge by Google Forms. The people who were interested in participating in the research accepted it through the Informed Consent Form (ICF), in the online version.

The link developed to host the electronic questionnaire for the study was made available online through social networks (WhatsApp, Instagram, Twitter and Facebook). The online questionnaire was open to receive responses for 60 days (March 2021 to May 2021). In the collection, the ethical precepts of non-exposure of the study participants were respected, thus guaranteeing the confidentiality of the information.

Data analysis

Data normality was assessed using the Kolmogorov-Smirnov test. The assumption of homogeneity of variances was evaluated by Levene's test. Bootstrapping procedures (1000 re-samples; 95% CI BCa) were performed to obtain greater reliability of the results, to correct deviations from normality of the sample distribution and differences between group sizes, and also to present a 95% confidence interval for differences between means, correlations and predictions[17].

Student's t-test was performed for independent samples in order to investigate the extent to which TMD and OHRQoL scores were different between men and women. The verification of the effect size was performed using Cohen's d[18]: d value =0.20 represents small effect size, d=0.50 medium and d=0.80 large. Pearson's correlation was used to investigate the association between TMD score and domains and total OHRQoL score. Multiple regression analysis was used to determine whether TMD (independent variable) and age (control variable) predict OHRQoL (dependent variables) for both men and women. There were not strong enough correlations between variables that indicated problems with multicollinearity (VIF interval =1.04 and 1.12). All VIF values were lower than the 5 or 10 considered acceptable by Hair et al[19]. All analyses were performed on SPSS v. 25.0.

RESULTS

When comparing the proportions of the sociodemographic variables between men and women (Table 1), no significant difference (p > 0.05) was found between the groups in any of the sociodemographic variables, indicating the homogeneity between the groups in relation to the sociodemographic profile.

Table 1 – Comparison of the proportions of sociodemographic variables between men and women

Variables	**Gender**		**X^2**	**P**
	Male (n=108)	**Female (n=299)**		
	***f* (%)**	***f* (%)**		
Age group				
20 to 29 years	26 (24.1)	69 (23.1)		
30 to 39 years	31 (28.7)	77 (25.8)		
40 to 49 years	12 (11.1)	76 (25.4)	1.241	0.265
50 to 59 years	16 (14.8)	47 (15.7)		
60 years or older	23 (21.3)	30 (10.0)		
Education				
Complete High School	19 (17.6)	75 (25.1)	2.507	0.113
Complete Higher Education	89 (82.4)	224 (74.9)		
Marital status				
With partner	78 (72.2)	212 (70.9)	0.067	0.795
Without partner	30 (27.8)	87 (29.1)		
Monthly Income				

Not informed	17 (15.7)	55 (18.4)	3.410	0.065
1 to 2 MW	11 (10.3)	55 (18.4)		
2.1 to 4 MW	21 (19.4)	57 (19.1)		
More than 4 MW	59 (54.6)	132 (44.1)		
Country Region				
South	76 (70.4)	210 (70.2)	0.001	0.975
Southeast	16 (14.8)	49 (16.4)		
Center-West	6 (5.6)	10 (3.3)		
Northeast	7 (6.5)	19 (6.4)		
North	3 (2.8)	11 (3.7)		
Perception of health				
Good	78 (72.2)	212 (70.9)	0.067	0.795
Regular/Poor	30 (27.8)	87 (29.1)		
Perception of oral health				
Good	70 (64.8)	186 (62.2)	0.231	0.631
Regular/Poor	38 (35.2)	113 (37.8)		

* Significant association: p <0.05- Chi-square test. MW: minimum wage (2021).

The results in Table 2 showed that women had a statistically higher score in all domains and in the total OHRQoL score, and also in the TMD score when compared to men ($p < 0.05$). These results indicate that women perceived themselves as having worse OHRQoL and higher TMD. It is noteworthy that the effect size of the differences was mostly medium (Cohen's *d* between 0.13 and 0.66).

Table 2 – Comparison of Temporomandibular disorder (TMD) and Oral Health-Related Quality of Life (OHRQoL) of Brazilian adults by gender

Variables	**Gender**		*p*	*d*
	Male (n= 108	**Female (n=299)**		
	M (SD)	M (SD)		
TMD	19.87 (17.90)	34.60 (23.90)	**0.001***	0.66
OHRQoL				
Functional limitation	0.21 (0.69)	0.49 (1.12)	**0.003***	0.27
Physical pain	0.95 (1.24)	1.85 (1.90)	**0.001***	0.51
Psychological discomfort	1.11 (1.54)	2.29 (2.33)	**0.001***	0.55
Physical disability	0.29 (0.77)	0.87 (1.35)	**0.001***	0.47
Psychological disability	0.61 (1.27)	1.37 (1.76)	**0.001***	0.46
Social disability	0.27 (0.83)	0.68 (1.34)	**0.001***	0.33
Disadvantage	0.26 (0.84)	0.38 (0.94)	0.215	0.13
Total score	3.69 (5.49)	7.92 (8.70)	**0.001***	0.53

* Significant Difference ($p < 0.05$) – Independent student t-test. SD: Standard Deviation. M: Average TMD: temporomandibular disorder; OHRQoL: oral health-related quality of life.

When analyzing the correlation between the severity score of TMD signs and symptoms and a (OHRQoL of Brazilian adults, by gender (Table 3), it was found that the TMD score showed a significant ($p < 0.05$) and positive correlation with the domains and the total OHRQoL score for both men (r between 0.24 and 0.40) and women (r between 0.29 and 0.56). It is noteworthy that the increase in TMD score is associated with worsening of OHRQoL (higher score), with greater intensity among women.

Table 3 – Correlation between the temporomandibular disorder (TMD) score and the Oral Health-Related Quality of Life (OHRQoL) of Brazilian adults by gender

Women	***Men***	1	2	3	4	5	6	7	8	9
1. TDM		-	0.06	**0.28***	**0.33***	**0.27***	**0.40***	**0.24***	**0.24***	**0.37***
2. Functional limitation		**0.29***	-	0.43*	0.36*	0.59*	0.38*	0.62*	0.46*	0.66*
3. Physical pain		**0.52***	0.43*	-	0.69*	0.49*	0.53*	0.38*	0.28*	0.77*
4. Psychological disc.		**0.50***	0.37*	0.73*	-	0.49*	0.75*	0.52*	0.29*	0.85*
5. Physical disability		**0.37***	0.54*	0.66*	68	-	0.57*	0.62*	0.31*	0.74*
6. Psychological dis.		**0.56***	0.51*	0.64*	0.69*	0.60*	-	0.57*	0.34*	0.83*
7.Social disability		**0.45***	0.44*	0.52*	0.64*	0.62*	68	-	0.56*	0.77*
8.Disadvantage		**0.32***	0.39*	0.45*	0.55*	0.58*	0.59*	0.67*	-	0.57*
9.Total OHRQoL		**0.56***	0.62*	0.83*	0.88*	0.83*	0.85*	0.80*	0.72*	-

* Significant correlation (p <.05); ** Significant correlation (p<.01) – Pearson's Correlation.
TMD: temporomandibular disorder. OHRQoL: oral health related to quality of life.

The results in Table 4 demonstrate that multiple regression analyses revealed that the TMD and age model (control variable) significantly explained all domains and the women's OHRQoL total score (R^2 between 0.10 and 0.32, $p < .05$). TMD was a positive predictor for all domains and the total OHRQoL score (β between 0.32 and 0.58), while age that was inserted as a control variable in the model presented a significant and positive prediction only on the domains of functional limitation (β = 0.14), physical disability (β = 0.17) and total score (β = 0.10).

For men, the model composed of TMD and age (control variable) significantly explained all domains, with the exception of the functional limitation domain, and the total OHRQoL score (R^2 between 0.01 and 0.15, $p < .05$). TMD was a positive predictor (β between 0.21 and 0.37), while the age that was inserted as a control variable in the model did not present significant prediction on the domains and the total OHRQoL score.

Table 4 – TMD and age as predictors of OHRQoL of Brazilian adults by gender

Predictors	Func. Lim.	Physical pain	Psych Disc.	Physical disability	Psych. disability	Social disability	Disadv.	OHRQoL
	β (IC)	β (IC)	β (IC)	β (IC)	β (IC)	β (IC)	β (IC)	β (IC)
Men								
Age	0.05 (-0.01; 001)	0.01 (-0.02; 0.02)	-0.03 (-0.02; 0.02)	-0.01 (-0.01; 0.01)	-0.02 (-0.02; 0.02)	-0.08 (-0.02; 0.01)	0.05 (-0.01; 0.01)	-0.01 (-0.07; 0.07)
TMD	0.08 (-0.01; 0.01)	**0.29 (0.01; 0.03)***	**0.32 (0.01; 0.04)***	**0.27 (0.01; 0.03)***	**0.40 (0.02; 0.04)***	**0.21 (0.00; 0.02)***	**0.25 (0.00; 0.02)***	**0.37 (0.06; 0.17)***
R^2	0.01	0.08	0.09	0.06	0.15	0.04	0.04	0.12
F	0.342	4.612*	6.530**	4.277*	10.249***	3.435*	3.303*	8.463***
Women								
Age	**0.14 (0.01; 0.02)***	0.06 (-0.01; 0.02)	0.09 (-0.01; 0.03)	**0.17 (0.01; 0.03)***	0.11 (0.01; 0.03)	-0.03 (-0.02; 0.00)	0.06 (-0.01; 0.01)	**0.10 (0.00; 0.13)***
TMD	**0.32 (0.01; 0.02)***	**0.53 (0.03; 0.05)***	**0.51 (0.04; 0.06)***	**0.40 (0.02; 0.03)***	**0.58 (0.04; 0.05)***	**0.44 (0.02; 0.03)***	**0.33 (0.01; 0.02)***	**0.58 (0.18; 0.25)***
R^2	0.10	0.27	0.25	0.16	0.32	0.20	0.10	0.32
F	17.239***	54.339***	49.804***	29.357***	72.573***	37.617***	17.405***	70.531***

β = Standardized regression coefficient; CI = 95% confidence interval. *$p < .05$.
TMD: temporomandibular disorder. Func. Lim.: functional limitation. dis.: disability. Desv: disadvantage. Psych.: psychological.

DISCUSSION

The main findings of this study indicate that women perceived themselves as having worse OHRQoL and greater severity of TMD signs and symptoms. The greater is the severity of TMD signs and symptoms, the worse is the OHRQoL for both men and women, and it is even higher in women. For both genders, TMD severity was a positive predictor for all domains and the total OHRQoL score, that is, TMD severity is positively associated with worse OHRQoL. Specifically in women, increasing age seems to further enhance the positive association between TMD severity and the domains of functional limitation, physical disability and total OHRQoL score.

In the present study, women perceived themselves with greater severity of TMD signs and symptoms than men, similar to the study by Ramalho et al.[20] and Trize et al.[21]. This fact can be attributed to an interaction of biological factors (differences in muscle structure and connective tissue), hormonal, psychological and social different between the genders[22]. There is also evidence that women are less tolerant of thermal pain, pressure pain[23] and more sensitive to pain in general[24]. TMD is also more likely to persist in women than in men[24].

Although the higher prevalence and severity of TMD in females is not well understood, the literature points to the hormone estrogen as a risk factor[25]. However, even in view of this previous information, it is worth noting that women seek treatment four times more than men[24,26].

Regarding OHRQoL, it was found that women have worse perception than men, which does not corroborate the study by Afonso et al.[27], OHRQoL refers particularly to the QoL of individuals that, for whatever reason, is associated with the health care system, its central element being oral health[26]. It is noteworthy that the instrument used to evaluate OHRQoL in this research has issues related to functional limitation, physical pain, psychological discomfort, physical disability, psychological disability, social disability and disadvantage[27].

Evidently, the women evaluated in this study have greater negative issues in these domains than men. Physical pain, for example, was confirmed as greater in women, when we found the greater severity of this symptom in TMD, as previously presented. Moreover, the concept of OHRQoL requires consideration not only of factors such as malaise, pain or functional changes, but also should include emotional aspects and social functions associated with oral health, which may be decreased in the women in this study.

The systematic review by Cohen-Carneio, Souza-Santos and Rebelo[28], which aimed to highlight the association between six social parameters and OHRQoL, identified that only one article reported a greater perception of a negative impact of OHRQoL on men; in the articles in which a positive association was found between women and OHRQoL impacts, women reported a greater number of negative impacts.

We found that the greater the severity of TMD signs and symptoms, the worse the OHRQoL in both genders, with greater intensity in women. It is inferred that the characteristic symptoms of TMD, such as pain, mainly, can have an impact on different contexts of people's lives, affecting OHRQoL. After all, as mentioned earlier, the instrument used to evaluate OHRQoL encompasses bio domains (functional limitation, physical pain, and physical disability) psychosocial (psychological discomfort, psychological disability, social disability and disadvantage). We verified, through a multiple regression analysis, that TMD severity is positively associated with worse OHRQoL.

The literature already indicates that the presence and severity of TMD compromise OHRQoL[29]. Due to the wide variety of signs and symptoms, people with TMD may present a high degree of physical and mental impairment, which may negatively reflect on OHRQoL. TMD patients report considerable painful symptoms, whether joint or muscle, in addition to a vast number of signs and symptoms that

may eventually influence the individual and psychosomatic characteristics of the subjects, reducing their OHRQoL[30].

A population-based health study in a region of Germany showed that TMD symptoms were associated with a significant reduction in quality of life, with the reduction being greater for women than for men. In the case of older adults, it seems that women also have worse OHRQoL[31].

Specifically in women, increasing age seems to further enhance the positive association between TMD severity and the domains of functional limitation, physical disability and total OHRQoL score. It is inferred that the advance of age can lead to physiological changes such as decreased masticatory muscle mass and strength, joint stiffness due to decreased synovial fluid in the TMJ, weakness in the periodontium (which will impact chewing), and adaptations of the masticatory act and, especially in older adults, use of dental prostheses, which potentiates the impact of TMD on OHRQoL. According to Michelloti and Iodice[32], changes in the age of the individual increase the likelihood of them presenting more severe signs and symptoms of TMD, which can negatively impact OHRQoL. Janal et al.[33] reported that the prevalence of TMD is the highest between 50 and 59 years of age, and not at younger ages.

Psychosocial risk factors for TMD include elevated levels of pain catastrophization, somatic awareness, depression, anxiety, and stress[34]. Due to multiple comorbid health conditions and their respective physical and psychosocial disabilities, older adults may be at greater risk of psychological distress than younger adults[35]. Tonin et al.[36], in their study, bring that the number of findings found in TMD patients, through magnetic resonance imaging, tended to increase with age, but with no significant difference between the genders. These physical and psychosocial impairments, when associated with TMD, negatively affected OHRQoL, which may justify, in part, what was found in this study.

It is known that not only the clinical conditions of TMD, but also other health problems, social and psychological conditions (which may be related to aging), can have an impact on quality of life and OHRQoL. Therefore, other issues must be considered[37], after all, OHRQoL is also defined as the absence of negative impacts of the oral condition on social life and a positive sense of self-confidence in relation to the oral condition[38]. Women have a higher risk of chronic myofascial pain and may have characteristics (e.g. hormonal, constitutional, behavioral or psychosocial factors different from men) that contribute to chronic TMD, impacting OHRQoL[39]. In short, the negative impact on OHRQoL seems to increase with age in patients with TMD, especially in women.

Despite the important results, this study has some limitations: 1) it is a cross-sectional and observational study, which prevents inferring cause and effect between variables; 2) the researched sample was more centralized in the South region, even having people from other regions of Brazil, mainly due to the fact that the authors are from this region of the country.

CONCLUSION

Based on the results obtained, it can be concluded that the women perceived themselves as having worse OHRQoL and higher TMD. It is noteworthy that TMD was an intervening factor in the OHRQoL of both men and women, and age can potentiate this influence in women. From a practical point of view, the importance of early identification of signs and symptoms stands out, thus being able to assist in the prevention and early treatment of TMD, avoiding its chronicity and possible repercussions on adult health and OHRQoL.

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