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Prevalence of orofacial pain conditions and their impact on oral health related quality of life in geriatric patients visiting dental college.

[1]Mohamed Thameemul Ansari. K.A. Saveetha, Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, India.

[2]Dr. Roland Prethipa. P, Department of Oral Medicine and Radiology, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, India.

Corresponding Author: Dr. Roland Prethipa. P, Department of Oral Medicine and Radiology, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, India.

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Abstract

Background: Orofacial pain is a general term for the pain occurring in the facial region and oral cavity due to any tooth related or non-odontogenic causes.

It is estimated that over 95% of orofacial pain is contributed to odontogenic conditions such as pulpal and periodontal patho logies. Other causes include oral mucosal conditions (oral ulcers, lichen planus, etc.,), Musculo skeletal conditions (Myofascial pain, TMJ arthritis, etc.,), salivary gland patho logies (mumps, sail a dentist, etc.,), neuro pathic pain (trigeminal neuralgia, etc.,), paranasal sinus patho logies, malignancy etc.

Orofacial pain affects millions around the world in their daily activities, social relations and have substantial impact on quality of life.

Aims and objective: The study was aimed to evaluate the prevalence of orofacial pain in elderly patients reported to our institute and to assess the impact of pain in oral health related quality of life.

Materials and methods: A cross sectional survey study was conducted among 147 geriatric patients in the age range of 60 to 80 years presented with orofacial pain during the past 6 months from January 2022 to August 2022, retrospectively. Survey questionnaire was prepared and given to them individually.

Results: Among 147 participants, 44.52% were males and 55.48% were females. Pulpal and periodontal conditions (36.7 and 27.1% respectively) were the most common contributors of orofacial pain in the oral region, temporomandibular disorders (14.8%), migraine (11.1%) in the facial region. Results showed orofacial pain had more impact with "felt tense because of pain" (86.3%), difficulty-chewing food (84.25%), "being irritable with other people" (78.08%).

Conclusion: The odontogenic cause was the major contributor of orofacial pain. The frequency of orofacial pain was more prevalent among women than men.

Keywords: Orofacial pain, odontogenic pain, geriatric population, prevalence, quality of life.

Introduction

International Association for the Study of Pain (IASP) defined pain as " An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage,". (IASP, 16 July 2021). The term "Oro-facial pain" (OFP) consists of two parts: Facial and Oral. Facial pain includes pain whose origin is below the orbitomeatal line, above the neck and anterior to the ears, while oral pain includes pain within the oral cavity. (1). Given the importance of oral cavity in terms of key functions such as eating and communication, the psychological significance of face and mouth, with manifestations of odontogenic, musculoskeletal and other conditions being reported with OFP, there is a definite reason to believe that this group of disorders has a major impact on functioning and quality of life. (2) The elderly patient frequently complains of head and facial pain. Pain management in the elderly demands consideration of several important factors as a result of a general reduction in physiological functioning in the patient, which can adversely affect the patient's quality of life. WHO global goals for 2020 emphasized the importance of understanding and reducing morbidity from oral and craniofacial diseases and thereby increasing the quality of life. This study assessed the prevalence of orofacial pain conditions in geriatric patients and its impact on oral health related quality of life.

Materials and Methods

This is a cross sectional survey study. A questionnaire was prepared with questions related to orofacial and odontogenic pain conditions and about quality of life. This study was conducted among geraitric patients visiting private dental college from December 2021 to August 2022. The participants volunteered for the survey. The prevalence of orofacial and odontogenic pain was calculated by checking the case history of all geraitric patients visiting private dental hospital in a selected time period. The questionnaire about quality of life was administered through a google form link to all the participants individually. 147 participants who had orofacial and odontogenic pain participated in the survey. All of the participants were ensured to have answered all the questions in the questionnaire and none of the participants were excluded from the study.

Results

The results were statistically analyzed using SPSS v26 and output variables were represented as bar charts. Among all geraitric patients reported to the institute, 45.5% of patients reported chief complaints of pain (Figure 1). Prevalence of OFP (Figure 2) was 26.94% (n=431subjects) with prevalence more among age group of 25-34 yrs i.e., 10.3% followed by 35-44 yrs age group 5.38% and least was seen in 65yrs and above age group i.e.

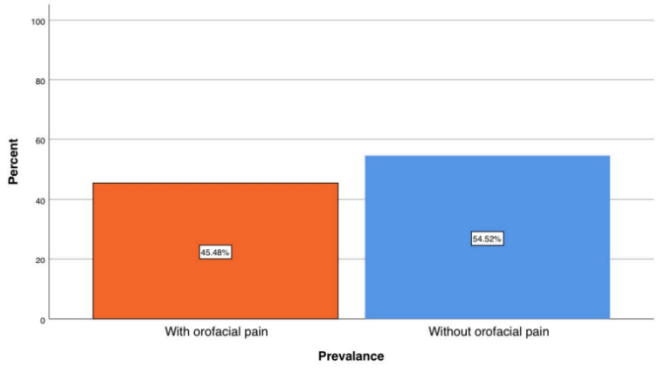

Figure 1: Bar graph represents the prevalence of orofacial pain among the geriatric patients visiting private dental hospitals. X- axis denotes prevalence and Y axis denotes percentage. Among all geraitric patients, 45.5% of patients gives compliance of orofacial pain.

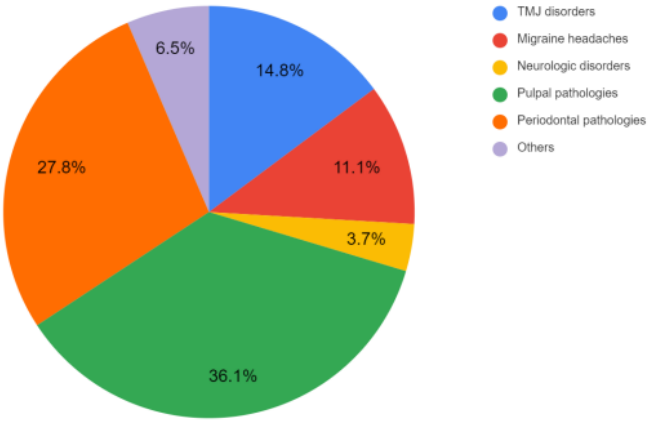

Figure 2: Pie chart represents the types of orofacial pain and odontogenic pain present among the geriatric patients.

In the pie, blue color indicates TMJ disorders, red indicates migraine headaches, yellow indicates neuro logical disorders, green denotes pulpal pathologies, orange indicates periodontal pathologies, violet indicates other causes. 36.1% of participants reported dental pain as their cause.

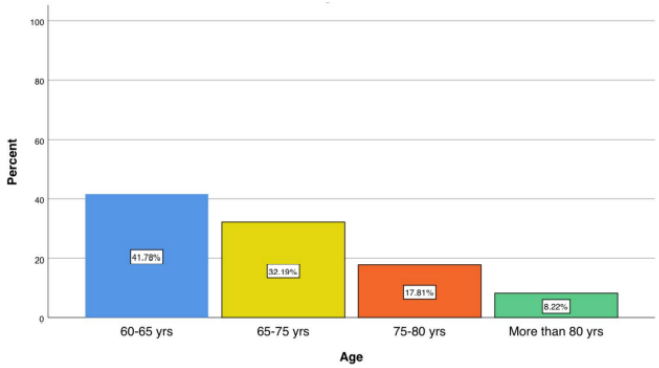

Figure 3: Bar graph represents the age of the participants. X- axis denotes age and Y axis denotes No. of respondents (in %).

Blue denotes age 60-65 yrs, yellow denotes age 65-75 yrs, orange denotes age 75-80 yrs and green denotes age more than 80.

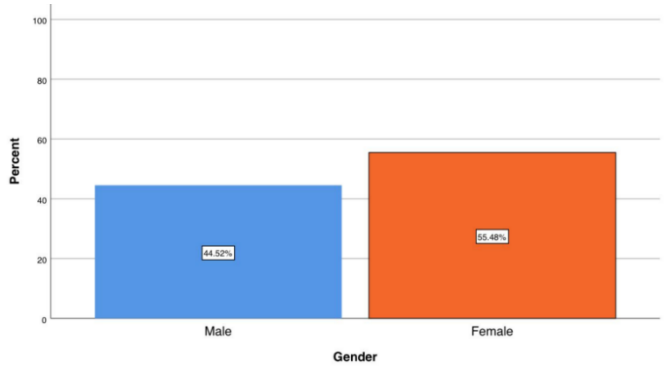

Figure 4: Bar graph represents the gender of the participants. X- axis denotes gender and Y axis denotes No. of respondents (in %). Blue denotes the Male and green denotes female.

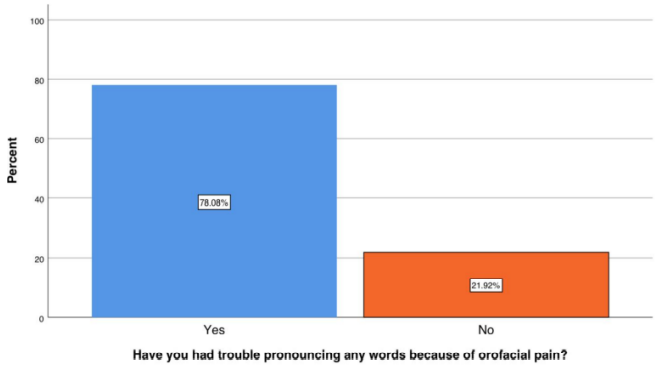

Figure 5: Bar graph represents participants having trouble pronouncing any words because of orofacial pain. X- axis denotes question and Y axis denotes No. of respondents (in %). Blue denotes the YES and orange denotes NO.

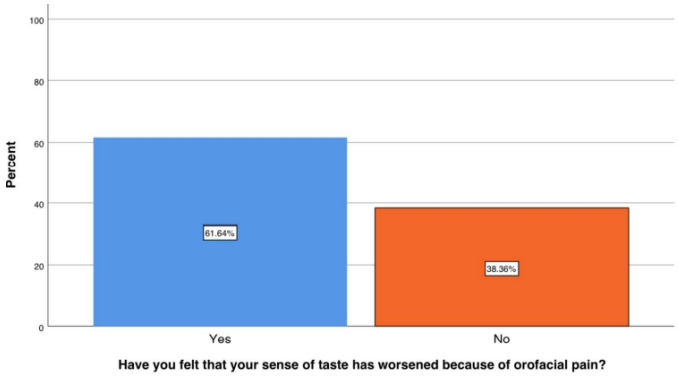

Figure 6: Bar graph represents participants' sense of taste worsening because of orofacial pain. X- axis denotes question and Y axis denotes No. of respondents (in %). Blue denotes the YES and orange denotes NO.

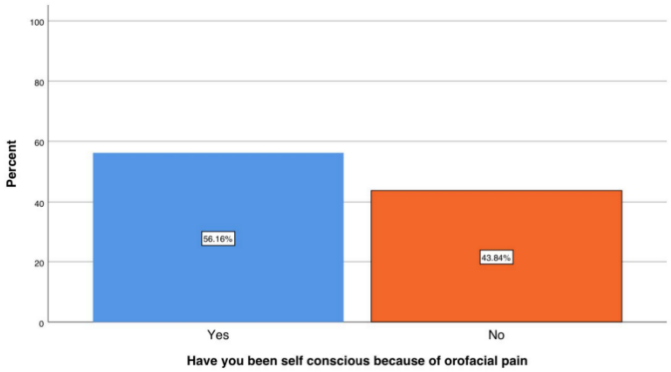

Figure 7: Bar graph represents participants being self-conscious because of orofacial pain. X- axis denotes question and Y axis denotes No.of respondents (in %). Blue denotes the YES and orange denotes NO.

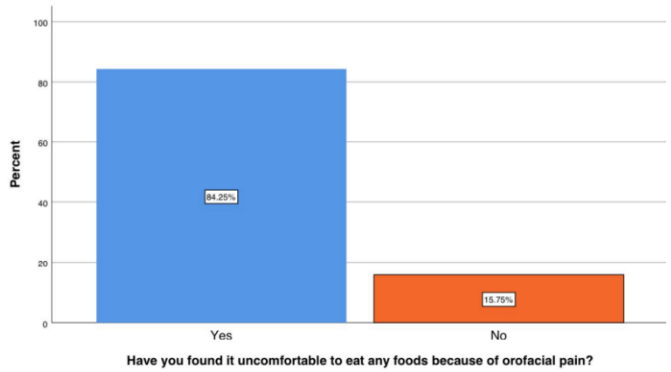

Figure 8: Bar graph represents the uncomfortableness of the participants during eating because of orofacial pain. X- axis denotes question and Y axis denotes No. of respondents (in %). Blue denotes the YES and orange denotes NO.

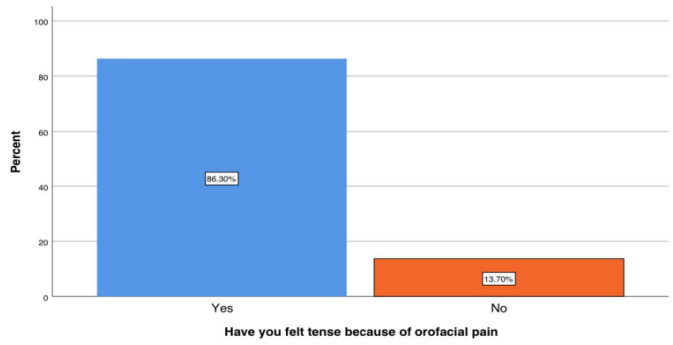

Figure 9: Bar graph represents participants feeling tensed because of orofacial pain. X- axis denotes question and Y axis denotes No. of respondents (in %). Blue denotes the YES and orange denotes NO.

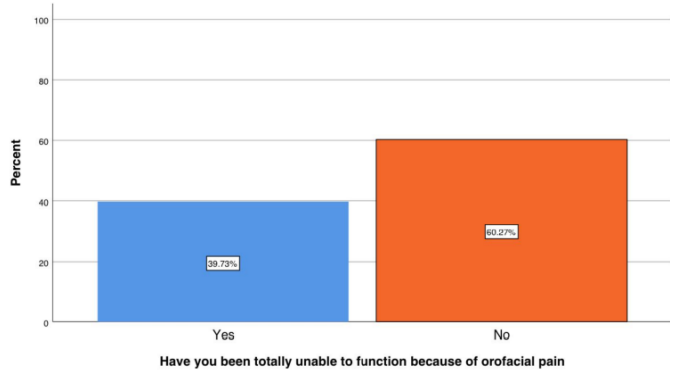

Figure 10: Bar graph represents participants being totally unable to function because of orofacial pain. Xaxis denotes question and Y axis denotes No. of respondents (in %). Blue denotes the YES and orange denotes NO.

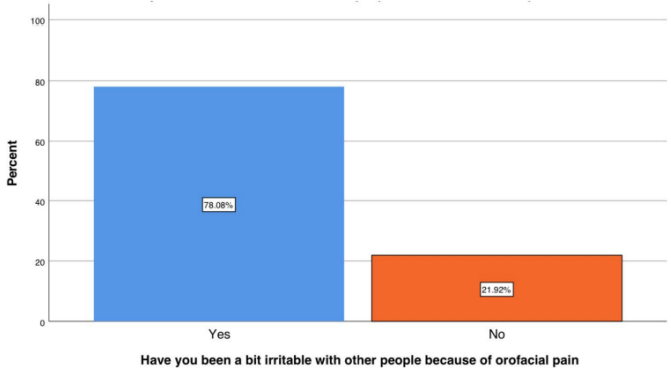

Figure 11: Bar graph represents participants being irritable with other people because of orofacial pain. Xaxis denotes question and Y axis denotes No. of respondents (in %). Blue denotes the YES and orange denotes NO.

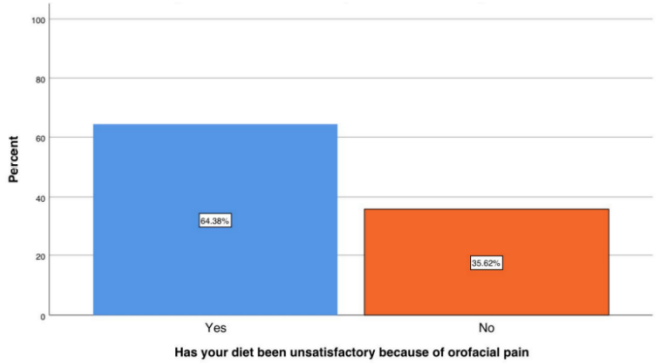

Figure 12: Bar graph represents participants having an unsatisfactory diet because of orofacial pain. Xaxis % of denotes question and Y axis denotes No.of respondents (in %). Blue denotes the YES and orange denotes NO

Discussion

From this study it is observed that prevalence of orofacial and odontogenic pain is about 45.5% among all geriatric patients visiting dental hospitals (Fig.1). In that, the most common pain was because of pulpal pathologies (36.1%) and the second most common was due to periodontal pathologies (27.8%) (Fig.2). Several studies show that dental pain is the most common odontogenic pain and occurs in several different ways(3). The results obtained in this study about quality of life shows that females are more impacted by orofacial pain than males. 55.4% of females were affected and 44.5% of males were affected (Fig.3). From the previous study by birgitta et al, females are at higher risk of developing orofacial pain than males. Females tend to notice and complain about their orofacial pain more than males. (4)78% of participants reported trouble during speech and pronunciation of words (Fig.4). Previous study by melisia et al, states that TMDs are of musculoskeletal origin and shows high prevalence of disturbance during speech and masticatory process (5). 61.6% participants mentioned that their sense of taste has worsened due to orofacial pain (Fig.5). Orofacial pain and odontogenic pain may result in burning sensation of mouth and decrease in taste due to its neurobiology, but it may not be seen in all cases (6). 86% participants feel tense and 79% are irritable with other people because of orofacial pain (Fig.8,10). Anxiety, depression, emotional signs of stress, unpredictable/uncertainty of pain, and psychological and cognitive elements of medication administration were sub themes within the psychological theme (7,8). Social relationships, provider experiences, socioeconomics and access to care, and roles and responsibilities were all sub themes within the social theme. 84% of participants are uncomfortable during eating and 56% are self-conscious because of orofacial pain (Fig.6,7,11). Previous study states that primary concern facing people living with TMD is to change the quality and quantity of food intake to minimize orofacial pain. This leads to nutrition imbalance and can cause health related issues (9). Another study states that pain during deglutition is because deglutition coincides with the centric relationship at the correct vertical dimension. So these pain appears in a cantered relationship can be explained by premature contacts responsible of local overload and compression (10)

Conclusion

To conclude, orofacial pain and odontogenic pain is highly appreciated in females than males. TMDs can also be a major cause for this. Severe orofacial pain is associated with poor quality of life, causing physio logical and psycho logical distress.

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