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Original Research

Assessment of oral health status and OHRQoL in patients with TMDs

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A R T I C L E I N F O

Keywords: Temporomandibular disorders, oral health status, physical pain.

A B S T R A C T

Background: Temporomandibular disorders (TMD) are a group of painful conditions that typically involve the temporomandibular joint(s) (TMJ) and/or masticatory muscles. The present study was conducted to assess oral health status and OHRQoL in patients with TMDs.

Materials & Methods: 76 patients of TMDs of both genderswere put on group I and non- TMDs healthy subjects in group II. OHRQoL was assessed using the OHIP-TMDs questionnaire. Oral health status was assessed using the WHO Oral Health Assessment Form for Adults.

Results: Group I had 30 males and 46 females and group II had 32 males and 44 females. SES was lower- middle seen in 58 in group I and 60 in group II and upper-middle 18 in group I and 16 in group II. The difference was significant (P< 0.05). The mean DMFT score was 5.6 and 5.1, mean teeth with gingival bleeding was 9.7 and 6.4, mean teeth with periodontal pockets was 0.34 and 0.11 in group I and group II respectively. The difference was significant (P< 0.05). The mean domainsscore for functional limitationwas 5.5 and 0.4, physical pain was 15.5 and 0.9, psychological discomfort was 11.9and 0.5, physical disability was 5.9 and 0.4, psychological disability was 14.3 and 0.3, social disability was 5.2 and 0, handicap was 4.7 and 0 and OHIP-TMD was 63 and 2.5 in group Iand group II respectively. The difference was significant (P< 0.05).

Conclusion: OHRQoL and oral health status are found to be poor among the TMDs when compared to the non-TMDs. There was a relationship between OHRQoL and oral health status among both groups.

Introduction:

Temporomandibular disorders (TMD) are a group ofpainful conditions that typically involve the temporomandibularjoint(s) (TMJ) and/or masticatory muscles.[1] Itis well recognized that a proper diagnosis is essential forthe successful treatment planning of TMD and that thisis one of the greatest challenges facing the professionalswho treat these conditions.[2]

The etiology of the TMD is multifactorial. It includes oral para functions, macrotraumas like the trauma of the mandible or TMJs, microtrauma, especially bruxism, and emotional stress, anxiety, or depression which involve an increase in the head-and-neck musculature's activity, occlusal alterations due to a loss of posterior support.[3] Women are most affected with proportions of five women for each man.[4] The role of sleep disorders, either due to obstructive causes like obstructive sleep apnea syndrome or to sleep movement disorders like sleep bruxism has been revealed in the last few years, and they entail an inability to relax the orofacial musculature and the rest of the body.[5]

Oral health-related QoL (OHRQoL) measurement is a well-accepted way of characterizing the impact of a disease on the subjects' perceived oral health.[6] The OHIP used in dentistry in its two versions: the extended version, including 49 questions, and the simplified

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version, including 14 questions which measure both the frequency and severity of oral problem.[7]The present study was conducted to assess oral health status and OHRQoL in patients with TMDs.

Materials & Methods:

The present study comprised of 76 patients of TMDsof both genders. All gave their written consent for the participation in the study.

Data such as name, age, gender etc. was recorded. TMDs patients were put on group I and non- TMDs healthy subjects in group II. OHRQoL was assessed using the OHIP-TMDs questionnaire. The OHIP-TMDs questionnaire consists of 22 items of questions distributed among seven domains: functional limitation, physical pain, psychological discomfort, physical disability, psychological disability, social disability, and handicap. The items are scored on a five-point Likert scale: never, hardly ever, occasionally, fairly often, and very often (scored 0–4). Higher scores indicate poorer QoL. Oral health status was assessed using the WHO Oral Health Assessment Form for Adults.Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

Results:

Groups	Group I	Group II	P value
Male:Female	30:46	32:44	0.15
SES			
Lower- middle	58	60	0.01
Upper- middle	18	16	

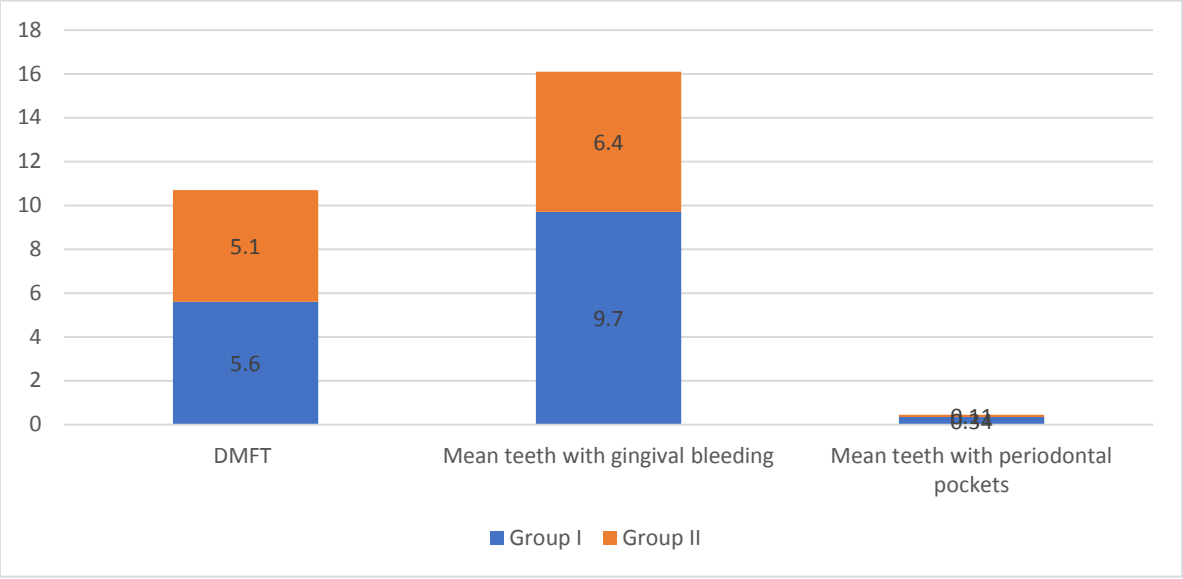
Table I Distribution of patients

Table I shows that group I had 30 males and 46 females and group II had 32 males and 44 females. SES was lower- middle seen in 58 in group I and 60 in group II and upper- middle 18 in group I and 16 in group II. The difference was significant (P< 0.05).

Parameters	Group I	Group II	P value
DMFT	5.6	5.1	0.82
Mean teeth with gingival bleeding	9.7	6.4	0.03
Mean teeth with periodontal pockets	0.34	0.11	0.05

Table II Assessment of Oral health status

Table II. graph I shows that mean DMFT score was 5.6 and 5.1, mean teeth with gingival bleeding was 9.7 and 6.4, mean teeth with periodontal pockets was 0.34 and 0.11 in group I and group II respectively. The difference was significant (P< 0.05).

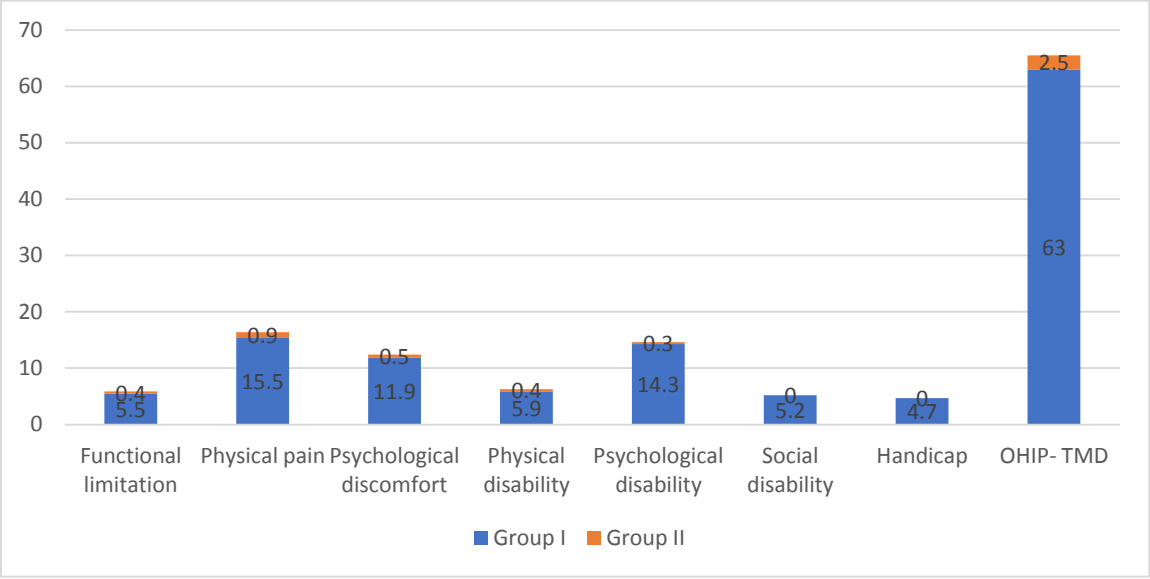


Graph I Assessment of Oral health status

Domains	Group I	Group II	P value
Functional limitation	5.5	0.4	0.05
Physical pain	15.5	0.9	0.01
Psychological discomfort	11.9	0.5	0.02
Physical disability	5.9	0.4	0.04
Psychologicaldisability	14.3	0.3	0.01
Social disability	5.2	0	0.02
Handicap	4.7	0	0.03
OHIP- TMD	63	2.5	0.01

Table III Oral health impact profile for temporomandibular disorders scores

Table III, graph II shows that mean domains score for functional limitation was 5.5 and 0.4, physical pain was 15.5 and 0.9, psychological discomfort was 11.9 and 0.5, physical disability was 5.9 and 0.4, psychological disability was 14.3 and 0.3, social disability was 5.2 and 0, handicap was 4.7 and 0 and OHIP- TMD was 63 and 2.5 in group I and group II respectively. The difference was significant (P< 0.05).



Graph I Oral health impact profile for temporomandibular disorders scores

Discussion:

Temporomandibular disorder (TMD) is a generic term for a series of clinical signs and symptoms involving masticatory muscles, temporomandibular joints (TMJ) and associated structures.[8] Most frequently reported symptom is pain, located in masticatory muscles and/or pre-auricular region, being exacerbated by chewing or other jaw activity.[9.10] Other symptoms may also be present, such as jaw movement limitation or asymmetry, joint noises, painless masticatory muscles hypertrophy, muscle fatigue and abnormal occlusal wear associated to parafunctions such as bruxism.[11]The present study was conducted to assess oral health status and OHRQoL in patients with TMDs.

We found that Group I had 30 males and 46 females and group II had 32 males and 44 females. SES was lower-middle seen in 58 in group I and 60 in group II and upper- middle 18 in group I and 16 in group II. Pawar et al[12]assessed the relationship between oral health status and oral health-related QoL (OHRQoL) among 320 participants (TMD 160 and Non-TMD 160 participants, respectively). TMD patients exhibited worse OHIP-TMDs scores when compared to the Non-TMD group (63.2 ± 3.78 vs. 2.15 ± 3.21). The mean Decayed, Missing, and Filled Teeth ($P < 0.001$), gingival bleeding ($P < 0.001$), pockets $P < 0.001$), and loss of attachment ($P = 0.677$) was significantly higher in the TMD group when compared to the non-TMD group. TMDs negatively affected the OHRQoL in the TMD group when compared to the non-TMD group.

We found that the mean DMFT score was 5.6 and 5.1, mean teeth with gingival bleedingwas9.7 and 6.4, mean teeth with periodontal pockets was 0.34 and 0.11 in group I and group II respectively. Naito et al[13]identified the literature on oral health status and health-related QOL, Temporomandibular disorders were highly associated with reduced health-related QOL. Poor oral status linked to both craniomandibular and cervical spinal pain was associated with increased impairment of health-related QOL. Dissatisfaction with the teeth and mouth, and a sensation of dry mouth contributed to reduce health-related QOL. Providing edentulous patients with implant-supported full dentures contributed to improve health-related QOL. Assessment of health-related QOL in relation to oral health with validated instruments remains insufficient. The present findings suggest that oral health status could affect health-related QOL in some settings; however, further evidence is needed to support this interpretation.

We observed that the mean domains score for functional limitation was 5.5 and 0.4, physical pain was 15.5 and 0.9, psychological discomfort was 11.9 and 0.5, physical disability was 5.9 and 0.4, psychological disability was 14.3 and 0.3, social disability was 5.2 and 0, handicap

was 4.7 and 0 and OHIP- TMD was 63 and 2.5 in group I and group II respectively.Lemos et al[14]evaluated the impact of the presence and severity of temporomandibular disorder signs and symptoms on oral health-related quality of life in 135 dentistry students. Volunteers with temporomandibular disorder, needing treatment and higher severityhad higher impact on oral health-related quality oflife. Volunteers with clinical temporomandibular disorder signshad further quality of life impairment, being that individualswith simultaneous muscle and joint temporomandibular disorders had higher Oral Health Impact Profile-14 scores.Most impaired domains were physical pain, functional limitation and psychological discomfort.

The limitation the study is small sample size.

Conclusion:

Authors found that OHRQoL and oral health status are found to be poor among the TMDs when compared to the non-TMDs. There was a relationship between OHRQoL and oral health status among both groups.

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