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Original Research Article

Comparison of Jaw Functional Limitations and Oral Health-Related Quality of Life in Masticatory Muscle Disorder and Disc Displacement Patients

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ABSTRACT

Aim: This study compared jaw functional limitations and oral health-related quality of life in patients with Masticatory Muscles Disorder (MMD) and Internal Derangement (DD) using the Jaw Functional Limitation Scale (JFLS-20) and the Oral Health Impact Profile-14 (OHIP-14). It also investigated the reliability of these scales within each patient group.

Materials and Methods: A total of 70 patients, 35 with MMD and 35 with DD, were included. Diagnoses were established based on the Research Diagnostic Criteria for Temporomandibular Disorders and clinical examination. JFLS-20 and OHIP-14 were administered to assess functional limitations and oral health-related quality of life. Statistical analyses were performed using independent t-tests and Pearson correlation.

Results: The DD group exhibited significantly higher JFLS-20 scores ($p<0.001$), indicating greater functional limitations. Similarly, OHIP-14 scores were significantly higher in DD patients ($p=0.003$), reflecting a greater impact on quality of life. JFLS-20 demonstrated higher reliability in the DD group ($\alpha=0.915$), whereas OHIP-14 showed higher reliability in the MMD group ($\alpha=0.862$). No significant correlation was found between JFLS-20 and OHIP-14 in either group.

Conclusions: DD patients experience more severe functional impairments and quality-of-life reductions than MMD patients. The differing reliability of JFLS-20 and OHIP-14 suggests that structural dysfunctions primarily impact function. On the other hand, myofascial pain is more closely associated with psychosocial distress. While the JFLS-20 may be more suitable for evaluating functional impairment in DD patients, the OHIP-14 may better capture the broader impact of MMD, emphasizing the importance of individualized treatment approaches.

Keywords: Disc displacement; Masticatory muscles; Myofascial pain dysfunction syndrome; Temporomandibular joint disorder; Quality of life; Surveys and questionnaires

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INTRODUCTION

Temporomandibular disorders (TMDs) are a collection of pathological conditions affecting the temporomandibular joint (TMJ) and masticatory muscles, often resulting in pain, functional impairments, and decreased quality of life.[1] Their etiology is multifactorial, involving mechanical, inflammatory, and psychosocial components.[2] The Research Diagnostic Criteria for Temporomandibular Disorders (RDC/TMD) Axis I provides a standardized approach for diagnosing TMDs, classifying them into three main categories: myofascial pain, disc displacement, and arthralgia/degenerative joint disorders.[3,4] Among these, Masticatory Muscle Disorders (MMD) primarily involve muscular dysfunction, whereas Disc Displacement (DD) is characterized by structural abnormalities such as disc displacement, often resulting in restricted mandibular movement.[4]

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Evaluating the functional and psychosocial effects of TMDs necessitates the use of reliable and validated assessment tools. The Jaw Functional Limitation Scale (JFLS-20) is commonly employed to measure restrictions in chewing, jaw mobility, and communication abilities,[5,6] while the Oral Health Impact Profile-14 (OHIP-14) assesses the influence of oral health issues on the overall quality of life.[7] Both instruments have demonstrated strong reliability in previous research and are crucial for understanding the impact of TMDs on daily functioning.

Despite the widespread use of these assessment tools, limited studies have directly compared jaw function limitations and quality of life between MMD and DD patients using both JFLS-20 and OHIP-14.[8] Given the divergent pathophysiological mechanisms underlying these disorders, a comparative analysis is imperative to elucidate how structural versus muscular dysfunctions impact functional impairment and quality of life.[9,10] This study aims to quantitatively evaluate the differences in functional limitations and oral health-related quality of life between patients diagnosed with MMD and those with DD. By elucidating these distinctions, the research may contribute to the formulation of more targeted therapeutic strategies and improve our understanding of the clinical burden associated with various subtypes of temporomandibular disorders.

MATERIALS AND METHODS

This study was conducted on patients diagnosed with TMD at Hacettepe University, Faculty of Dentistry, Department of Oral and Maxillofacial Surgery in 2025. Ethical approval for the study was obtained from Hacettepe University Health Sciences Research Ethics Committee (Approval Number: 2025/05-53). Written informed consent was obtained from all participants before their inclusion in the study. The study included a total of 70 patients, comprising the first 35 consecutively diagnosed DD cases and the first 35 consecutively diagnosed MMD cases. The diagnoses were established based on the RDC/TMD and clinical examination findings for the MMD and DD groups.[3,4] Patients with systemic diseases affecting the temporomandibular joint, a history of maxillofacial trauma, prior TMJ surgery, or ongoing TMD treatment were excluded from the study. All participants completed the JFLS-20 and the OHIP-14 questionnaires to assess jaw function and oral health-related quality of life. The surveys were conducted face-to-face, and all patients were given an average of 10 minutes for each questionnaire. These validated instruments have been widely used to determine TMD-related functional impairment and psychosocial impact.[5,7,11,12] Data were analyzed using IBM SPSS Statistics version 26. Descriptive statistics were used to present categorical variables as frequencies and percentages, while continuous variables were reported as means and standard deviations. According to the criteria for normal distribution, skewness and kurtosis values must be within the range of ±1.5.[13] The analysis revealed that the data followed a normal distribution. Based on these results, parametric tests were applied for comparative analyses. Independent sample t-tests were used to compare JFLS-20 and OHIP-14 scores between the two patient groups. Pearson correlation analysis was conducted to examine the relationship between functional limitation and oral health-related quality of life. A significance level of $p<0.05$ was considered statistically significant for all analyses. Reliability of the JFLS-20 and OHIP-14 questionnaires was assessed using Cronbach's alpha coefficients, calculated separately for the MMD and DD groups.

RESULTS

The study included 70 patients, 35 diagnosed with MMD and 35 with DD, ensuring an equal sample size for the two comparison groups.

Reliability analysis was conducted for both scales used in the study. The Cronbach's Alpha values indicated high internal consistency for both scales across both patient groups.[14] The JFLS-20 demonstrated the highest reliability in the DD group ($\alpha=0.915$), while the OHIP-14 showed the highest reliability in the MMD group ($\alpha=0.862$) (Table 1).

The total JFLS-20 score was significantly higher in the DD group (4.42 ± 1.79) compared to the MMD group (1.83 ± 0.59, $p = 0.001$) (Table 2). Similarly, all subdimensions of JFLS-20 exhibited significantly higher scores in the DD group, indicating more significant functional limitations. The mean chewing limitation score was 4.77 ± 2.16 in the DD group and 2.99 ± 1.16 in the MMD group ($p=0.001$). The movement limitation score was 5.67 ± 2.31 in the DD group and 2.73 ± 0.99 in the MMD group ($p=0.001$).

Table 1. Reliability Analysis of JFLS-20 and OHIP-14 in MMD and DD Groups

Scale and Subscales	MMD Group (Cronbach's Alpha)	DD Group (Cronbach's Alpha)
JFLS-20	0.780	0.915
OHIP-14	0.862	0.830

JFLS-20: Jaw Functional Limitation Scale 20, OHIP-14: Oral Health Impact Profile-14, MMD: Masticatory Muscle Disorders, DD: Disc Displacement

Table 2. Comparison of Jaw Functional Limitations and Oral Health-Related Quality of Life Between MMD and DD Patients

	MMD Group (Mean ± SD)	DD Group (Mean ± SD)	t-value†	p-value
Total JFLS-20 Score	1.83 ± 0.59	4.42 ± 1.79	-8.13	0.001**
Chewing Limitation	2.99 ± 1.16	4.77 ± 2.16	-4.30	0.001**
Movement Limitation	2.73 ± 0.99	5.67 ± 2.31	-6.92	0.001**
Verbal/Non-verbal Communication Limitation	0.77 ± 0.51	3.71 ± 2.00	-8.45	0.001**
Total OHIP-14 Score	30 ± 8.25	36.49 ± 9.1	-3.12	0.003**
Functional Limitation	2.49 ± 1.09	3.86 ± 2.02	-3.54	0.001**
Physical Pain	7 ± 1.31	7.83 ± 1.82	-2.19	0.033*
Psychological Distress	5 ± 2.01	5.57 ± 2.08	-1.17	0.247
Physical Disability	3.86 ± 1.56	4.86 ± 2.18	-2.21	0.031*
Psychological Disability	4.14 ± 1.94	5.49 ± 1.79	-3.01	0.004**
Social Disability	3.91 ± 2.02	4.86 ± 2.05	-1.94	0.057
Handicap	3.6 ± 1.54	4.03 ± 1.54	-1.16	0.249

SD: Standard deviation, JFLS-20: Jaw Functional Limitation Scale 20, OHIP-14: Oral Health Impact Profile-14, MMD: Masticatory Muscle Disorders, DD: Disc Displacement, *p<0.05, **p<0.001

†: "The results of Levene's test indicated a violation of the homogeneity of variances assumption (p<.05). Consequently, the Welch adjusted t-test statistic was used for group comparisons, and the p-values derived from this test are presented."

The verbal/nonverbal communication limitation score was also higher in the DD group (3.71 ± 2.00) compared to the MMD group (0.77 ± 0.51, p=0.001) (Table 2).

The total OHIP-14 score was significantly higher in the DD group (36.49 ± 9.1) compared to the MMD group (30 ± 8.25, p=0.003), indicating a more significant negative impact on oral health-related quality of life in the DD group (Table 2). Significant differences were found in multiple subdimensions. The functional limitation score was 3.86 ± 2.02 in the DD group and 2.49 ± 1.09 in the MMD group (p= 0.001). The physical pain score was 7.83 ± 1.82 in the DD group and 7 ± 1.31 in the MMD group (p= 0.033). The physical disability score was 4.86 ± 2.18 in the DD group and 3.86 ± 1.56 in the MMD group (p=0.031). The psychological disability score was higher in the DD group (5.49 ± 1.79) compared to the MMD group (4.14 ± 1.94, p=0.004). No significant differences were observed between the groups in psychological distress (p=0.247), social disability (p=0.057), and handicap (p=0.249) (Table 2).

The correlation analysis between JFLS-20 and OHIP-14 scores showed no significant association in the MMD group (p=0.946). In the DD group, a weak positive correlation was found (r=0.29), but it did not reach statistical significance (p=0.091).

An item-level analysis of JFLS-20 and OHIP-14 showed significant differences in multiple items between the two groups (Table 3). Patients in the DD group reported greater difficulty in jaw opening, chewing hard foods, and verbal/non-verbal expressions. In OHIP-14, significant differences were found in aspects related to eating difficulties, self-confidence, and discomfort (Table 3).

Table 3. Item-Level Comparison of JFLS-20 and OHIP-14 Scores Between MMD and DD Patients

	MMD Group (Mean ± SD)	DD Group (Mean ± SD)	t-value†	p-value
JFLS Questions				
Chewing tough foods	6.54 ± 1.9	7.8 ± 2.29	-2.50	0.015*
Chewing hard bread	5.66 ± 2.14	7.37 ± 2.79	-2.89	0.005**
Chewing chicken	3.06 ± 1.92	5.29 ± 3.01	-3.69	0.001**
Chewing crackers	2.26 ± 1.62	4.23 ± 3.15	-3.29	0.002**
Chewing soft foods	0.37 ± 0.84	2.49 ± 2.56	-4.64	0.001**
Eating soft non-chew foods	0.06 ± 0.24	1.46 ± 2.37	-3.48	0.001**
Open wide enough to bite from a whole apple	5.66 ± 1.97	8.6 ± 2.76	-5.14	0.001**
Open wide enough to bite into a sandwich	4.54 ± 1.85	7.49 ± 2.81	-5.17	0.001**
Open wide enough to talk	0.43 ± 0.85	3.29 ± 3.09	-5.27	0.001**
Open wide enough to drink from a cup	0.29 ± 0.71	3.31 ± 3.4	-5.16	0.001**
Swallowing	0.43 ± 1.01	2 ± 2.71	-3.21	0.002**
Yawning	5 ± 2.39	7.94 ± 2.5	-5.04	0.001**
Talk	0.6 ± 1.48	2.8 ± 2.62	-4.32	0.001**
Singing	0.43 ± 1.04	2.91 ± 2.75	-5.01	0.001**
Putting on a happy face	0.2 ± 0.58	2.94 ± 2.7	-5.87	0.001**
Putting on an angry face	0.03 ± 0.17	3.26 ± 3.24	-5.89	0.001**
Frowning	0.03 ± 0.17	2.77 ± 3.09	-5.25	0.001**
Kissing	0.09 ± 0.28	3.4 ± 3.39	-5.77	0.001**
Smiling	0.4 ± 0.85	3.26 ± 3.22	-5.08	0.001**
Laughing	0.49 ± 0.92	5.86 ± 3.19	-9.57	0.001**
OHIP-14 Questions				
Pronouncing words	1.29 ± 0.57	2.14 ± 1.24	-3.71	0.001**
Sense of taste worsened	1.2 ± 0.58	1.71 ± 1.13	-2.40	0.020*
Psinful aching	3.86 ± 0.81	3.91 ± 1.12	-0.24	0.808
Uncomfortable to eat any foods	3.14 ± 0.94	3.91 ± 1.17	-3.03	0.003**
Been self-conscious	1.77 ± 1.11	2.26 ± 1.22	-1.74	0.087
Felt tense	3.23 ± 1.29	3.31 ± 1.3	-0.28	0.782
Diet been unsatisfactory	1.83 ± 0.95	2.63 ± 1.42	-2.77	0.007**
Interrupt meals	2.03 ± 0.89	2.23 ± 1.14	-0.82	0.416
Difficult to relax	2.69 ± 1.3	3.43 ± 1.04	-2.64	0.01*
Feel a bit embarressed	1.46 ± 0.82	2.06 ± 1.16	-2.50	0.015*
Irritable with people	2.03 ± 1.1	2.54 ± 1.12	-1.94	0.057
Difficulty doing usual jobs	1.89 ± 1.11	2.31 ± 1.16	-1.58	0.118
Life in general less satisfying	2.46 ± 1.34	2.63 ± 1.29	-0.55	0.586
Totally unable to function	1.14 ± 0.43	1.4 ± 0.6	-2.05	0.044*

JFLS-20: Jaw Functional Limitation Scale 20, OHIP-14: Oral Health Impact Profile-14, MMD: Masticatory Muscle Disorders, DD: Disc Displacement, S.D.: standard deviation, t: independent sample t-test, *p<0.05 **: p<0.01

†: "The results of Levene's test indicated a violation of the homogeneity of variances assumption (p<.05). Consequently, the Welch adjusted t-test statistic was used for group comparisons, and the p-values derived from this test are presented."

DISCUSSION

This study conducted a comparative analysis of jaw function limitations and oral health-related quality of life among patients diagnosed with MMD versus those with DD of the TMJ. The findings indicate that patients with DD exhibit statistically significant functional impairments in jaw movements and mastication, accompanied by a markedly more significant detrimental effect on their oral health-related quality of life.[15] These results underscore the distinct pathophysiological mechanisms that differentiate these two types of TMDs and advocate for tailored therapeutic interventions to address the specific needs of each patient cohort.[16]

The findings indicate that the JFLS-20 exhibited enhanced reliability within the DD subgroup, while the OHIP-14 demonstrated superior reliability among patients with MMD. This disparity highlights fundamental differences in the pathophysiological mechanisms and clinical presentations associated with these TMDs. Disc disorders, characterized primarily as structural disorders, result in chronic mechanical impediments, rendering the JFLS-20 a more robust and consistent instrument for evaluating functional impairments related to jaw movement.[17] Given that restriction in jaw mobility associated with DD remains relatively stable over time, the resultant responses on the JFLS-20 reflect enhanced reliability in this population. In contrast, MMD is primarily characterized by muscle pain, which fluctuates due to factors such as stress, parafunctional habits, and psychological influences.[18] This variability may contribute to lower consistency in JFLS-20 responses. However, OHIP-14, which captures the psychosocial impact of oral health conditions, appears to be more reliable in MMD patients, likely due to the strong association between chronic myofascial pain and emotional distress.[19] Since psychological factors play a significant role in MMD, self-reported quality-of-life measures may provide more consistent results in this group.[2,20] These findings emphasize the importance of condition-specific assessment tools in TMD research and clinical practice. While JFLS-20 is more suitable for evaluating functional impairment in DD patients, OHIP-14 may better capture the broader impact of MMD on daily life.[21] This supports the need for an integrated approach that considers physical function and psychosocial well-being in managing TMDs.

The significantly higher JFLS-20 scores in the DD group suggest that the structural alterations associated with DD, such as reduction and condylar deformation, contribute to more severe functional impairments. This is in contrast to the primarily muscular dysfunction seen in MMD.[22] The more difficulty reported by DD patients in tasks requiring wide mouth opening (e.g., biting into an apple or yawning) aligns with previous findings indicating that structural constraints in DD restrict mandibular mobility. Conversely, MMD patients exhibited lower functional impairment, possibly due to the dynamic and fluctuating nature of muscular pain, which may allow periods of relative relief in jaw function.[23]

The OHIP-14 results further reinforce the functional disparity between these two groups, as DD patients reported a significantly more significant negative impact on their quality of life. The increased scores in functional limitation, physical disability, and psychological disability domains among DD patients suggest that the chronicity and mechanical nature of their dysfunction impose a more persistent and intrusive burden on daily activities. In contrast, the absence of significant differences in psychological distress and social disability between the groups suggests that both conditions can cause substantial emotional distress and social impairment despite their differing pathophysiological bases. This finding underscores the importance of addressing the psychosocial aspects of TMD management in both patient populations.[24,25]

Interestingly, correlation analysis between JFLS-20 and OHIP-14 scores did not reveal a statistically significant relationship, particularly in the MMD group. This suggests that functional impairment and perceived quality of life impact do not always align directly. One possible explanation is that patients with MMD who experience episodic pain may develop coping strategies that mitigate the perceived burden of their condition. Additionally, the OHIP-14 primarily captures subjective perceptions of oral health, whereas the JFLS-20 assesses objective functional limitations.[6,26] The weak correlation in the DD group ($r = 0.29$) is statistically non-significant. This suggests that while functional impairment contributes to a decline in oral health-related quality

of life, other factors may also play crucial roles. These factors include pain chronicity, psychological adaptation, and treatment history.

These findings carry important clinical implications. The more significant functional impairment observed in DD patients suggests that treatment strategies should prioritize restoring mandibular mobility and addressing structural limitations, potentially through physiotherapy, occlusal adjustments, or surgical interventions in severe cases.[26-28] On the other hand, MMD patients may benefit more from multimodal pain management approaches, including physical therapy, cognitive-behavioral therapy, and pharmacological interventions targeting muscular dysfunction.[29] Given the comparable levels of psychological distress in both groups, an integrated biopsychosocial approach remains essential in the management of TMDs.

Future research should further explore the interplay between functional impairment, pain perception, and quality of life in different TMD subtypes. Longitudinal studies investigating how these factors evolve over time and respond to different treatment modalities could provide valuable insights into optimizing patient outcomes. Moreover, developing more comprehensive assessment tools that integrate functional and psychosocial dimensions may enhance our ability to tailor interventions effectively.

Despite its valuable insights, this study has certain limitations that should be acknowledged. One major limitation is its cross-sectional design, which captures only a snapshot of the patients' functional impairments and quality of life. Given the fluctuating nature of myofascial pain and the progressive nature of internal derangement, a longitudinal approach would have provided a more comprehensive understanding of how these conditions evolve over time and how treatment interventions influence their trajectory.

Another limitation is the reliance on self-reported measures such as the OHIP-14. Despite being widely used, it may be influenced by individual pain tolerance, psychological resilience, and coping mechanisms. Patients with chronic conditions often undergo adaptive changes in their perception of disability, which may not always align with objective functional impairment. The weak correlation observed between functional limitation and quality of life scores in this study may, in part, be attributed to these subjective biases. Incorporating objective assessments, such as kinematic jaw tracking or electromyographic analysis of masticatory muscle activity, could enhance the validity of the findings. Additionally, the study did not account for potential confounding factors such as the duration of symptoms, prior treatments, or concurrent psychological conditions, all of which may significantly influence functional impairment and quality of life perceptions. Given the well-documented interplay between chronic pain and mental health, future research should integrate psychometric evaluations, such as anxiety and depression scales, to better delineate their role in TMD-related disability.

Lastly, while this study focused on two well-defined TMD subgroups, the heterogeneity of temporomandibular disorders remains challenging. Many patients present with overlapping features of myofascial pain and internal derangement, complicating strict diagnostic categorization. Therefore, this study's findings may not be generalizable to patients with mixed TMD presentations. Future studies employing more nuanced subgroup analyses or machine learning-based classification models may help refine diagnostic distinctions and improve treatment stratification.

Despite these limitations, the study provides important insights into the functional and psychosocial burdens of TMDs, highlighting the need for individualized, multidisciplinary treatment approaches. Addressing these limitations in future research could further enhance our understanding of TMD pathophysiology and optimize patient care strategies.

In conclusion, this study highlights the distinct functional and quality-of-life impairments in MMD and DD patients, emphasizing the importance of individualized management approaches. While DD patients experience more severe functional limitations, both groups exhibit significant psychological distress, warranting a holistic treatment strategy that addresses both the physical and emotional aspects of TMDs.

DECLARATIONS

Author contribution: GA conceptualization, methodology, measurement, writing—original draft, review and editing, visualization, supervision, project administration; SEM conceptualization, methodology, measurement, validation, analysis, writing—review and editing.

Both authors have viewed and agreed to the submission

FUNDING

None.

DATA AVAILABILITY

Upon request via email, data will be shared in accordance with ethical considerations.

ETHICS APPROVAL

The Ethics Committee at Hacettepe University approved the design and procedures of this study (Hacettepe University Health Sciences Research Ethics Committee (Approval Number:2025/05-53).

Consent to participate: Informed consent was obtained from all participants included in the study.

COMPETING INTERESTS

The authors declare no competing interests.

Çiğneme Kaslarının Bozukluğu ve Disk Deplasmanlı Hastalarda Çene Fonksiyon Kısıtlılıkları ile Ağız Sağlığına Bağlı Yaşam Kalitesinin Karşılaştırılması

ÖZET

Amaç: Bu çalışmada, Çiğneme Kasları Bozukluğu (Masticatory Muscle Disorder, MMD) ve Disk Deplasmanı / İç Düzen Bozukluğu (Disc Displacement, DD) olan hastalarda çene fonksiyon kısıtlılıkları ve ağız sağlığına bağlı yaşam kalitesi, Çene Fonksiyonel Kısıtlılık Ölçeği-20 (Jaw Functional Limitation Scale-20, JFLS-20) ve Ağız Sağlığı Etki Profili-14 (Oral Health Impact Profile-14, OHIP-14) kullanılarak karşılaştırılmıştır. Ayrıca bu ölçeklerin her bir hasta grubundaki güvenirliği incelenmiştir.

Gereç ve Yöntem: Çalışmaya 35'i MMD, 35'i DD olmak üzere toplam 70 hasta dahil edilmiştir. Tanılar, Temporomandibular Bozukluklar için Araştırma Tanı Kriterleri ve klinik muayene bulgularına göre konulmuştur. Fonksiyonel kısıtlılıkları ve ağız sağlığına bağlı yaşam kalitesini değerlendirmek için JFLS-20 ve OHIP-14 ölçekleri uygulanmıştır. İstatistiksel analizler bağımsız örneklem t-testi ve Pearson korelasyon analizi ile gerçekleştirilmiştir.

Bulgular: DD grubunda JFLS-20 skorları anlamlı düzeyde yüksek bulunmuştur ($p<0.001$) ve bu durum daha fazla fonksiyonel kısıtlılığa işaret etmektedir. Benzer şekilde, OHIP-14 skorları da DD hastalarında anlamlı derecede yüksek saptanmıştır ($p=0.003$). JFLS-20, DD grubunda ($\alpha=0.915$), OHIP-14 ise MMD grubunda daha yüksek iç güvenirlik göstermiştir ($\alpha=0.862$). Her iki grupta da JFLS-20 ve OHIP-14 skorları arasında anlamlı bir korelasyon saptanmamıştır.

Sonuçlar: DD hastaları, MMD hastalarına kıyasla daha şiddetli fonksiyonel kısıtlılıklar ve daha belirgin yaşam kalitesi kayıpları yaşamaktadır. JFLS-20 ve OHIP-14'ün farklı güvenirlik düzeyleri, yapısal disfonksiyonların öncelikle fonksiyonel parametreleri etkilediğini, miyofasiyal ağrının ise daha çok psikososyal sıkıntı ile ilişkili olduğunu düşündürmektedir. JFLS-20, DD hastalarında fonksiyonel bozuklukların değerlendirilmesi için daha uygun görünürken, OHIP-14 MMD'nin daha geniş kapsamlı etkilerini yakalamada daha duyarlı olabilir ve bireyselleştirilmiş tedavi yaklaşımlarının önemini vurgulamaktadır.

Anahtar Kelimeler: Anketler ve ölçekler; Çiğneme kasları; Disk deplasmanı; Miyofasiyal ağrı disfonksiyon sendromu; Temporomandibular eklem bozukluğu; Yaşam kalitesi

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