Journal of Chemical Health Risks

www.jchr.org

JCHR (2026) 16(2), 2364-2377 | ISSN:2251-6727

"A Survey on Interprofessional Collaboration Between Dentists and Physiotherapists in the Management of Temporomandibular Disorders (TMD)"

Rutuja R. Pimparwar[1] , Dr. Pinky Dutta[2], Dr. Shwetha Sasidharan[3]

[1]Master of Physiotherapy, Garden City University

[2]Professor and Head of Physiotherapy Department , Garden City University

[3]Assistant Professor , Garden City University

Garden City University, Bengaluru.

(Received: 28 January 2026 Revised: 16 March 2026 Accepted: 09 April 2026)

KEYWORDS:

Temporomandibular disorders (TMD), interprofessional collaboration, physiotherapy, dental practice, referral pattern, multidisciplinary management.

ABSTRACT:

Background: Temporomandibular disorders (TMD) encompass a wide range of conditions affecting the temporomandibular joint (TMJ), muscles of mastications, and associated structures. Given the multifactorial etiology of TMDs, effective management often requires an interprofessional approach involving dentists and physiotherapists. However, collaboration between these professionals remains limited due to lack of awareness and established referral pathways.

Aim: To assess the current level of interprofessional collaboration between dentists and physiotherapists in the management of temporomandibular disorders (TMDs) and to identify barriers influencing effective cooperation.

Methods: A cross-sectional online survey was conducted using a structured Google Form distributed among dental practitioners across various specialties. The questionnaire included 15 items covering demographic information, evaluation practices, treatment methods, referral patterns, and collaboration with physiotherapists. Data were analyzed using descriptive statistics and represented through pie and bar charts.

Results: A total number of 82 respondents participated in this study, with 81.7% holding a bachelor's degree and 92.7% currently in practice. The majority (59.2%) were general dentists. Commonly reported TMD issues included trauma from occlusion (48.7%), parafunctional habits (40.8%), and muscle tightness (40.8%). About 77.6% of respondents referred patients to other practitioners, primarily oral surgeons (66.1%) and physiotherapists (62.7%). Neck pain (57.6%) and masticatory muscle tenderness (55.9%) were key reasons for physiotherapy referrals. The main barrier to collaboration was lack of awareness about physiotherapy's role in TMD management (41.2%).

Conclusion: The findings highlight a positive trend toward interprofessional collaboration between dentists and physiotherapists in TMD management. However, gaps persist due to limited awareness, absence of clear referral protocols, and inadequate interdisciplinary training. Strengthening communication and structured referral systems can enhance comprehensive patient care and treatment outcomes.

Journal of Chemical Health Risks

www.jchr.org

JCHR (2026) 16(2), 2130-2135 | ISSN:2251-6727

INTRODUCTION:

Temporomandibular dysfunction (TMD) encompasses a range of orofacial disorders that impact the temporomandibular joint (TMJ) and its related structures. TMD has various underlying causes. The TMJ is one of the most frequently utilized joints in the human body[1]. The temporomandibular joint (TMJ) is situated just in front of the external auditory canal and consists of the upper temporalis bone and the lower mandible. It contains an intra-articular disk within the joint capsule, and its contractile tissues include the muscles of mastication[2].

A distinctive characteristic of the temporomandibular joint (TMJ) is that it functions as two joints. The articular disc between the mandibular condyle and the temporal bone divides the area into two separate joint cavities. In the inferior joint, where the mandibular condyle meets the articular disc, the movement is primarily rotary or hinge-like. In contrast, the superior joint, located between the temporal bone and the articular disc, allows for gliding or translatory movement[3]. The frequency of movement is assessed as approximately 1500–2000 times a day[1].From a pathoanatomical perspective, TMDs can be categorized based on their involvement of the muscles of mastication, the structures of the temporomandibular joint (TMJ), including the intra-articular disc and joint capsule, or a combination of both muscle and joint issues.

The temporomandibular joint (TMJ) and its related structures—including scapulohumeral region and the cervical spine —play a crucial role in maintaining orofacial function and balance[5,6]. Temporomandibular disorders (TMDs) affect approximately 10% of the general population, with a notably higher prevalence among women aged 20 to 40 years [6,7]. Common clinical manifestations include restricted mouth opening, TMJ joint sounds, headaches, and articular or muscular pain [8,9], all of which can significantly impact an individual's quality of life[10].

The development of TMD is often associated with comorbid conditions such as stress, parafunctional habits, inadequate sleep, and psychosocial factors including anxiety and depression. Diagnosis can be effectively guided using the TMJ Diagnostic Criteria (DC/TMJ)[6]. Despite advances in understanding, the etiology remains multifactorial and not fully elucidated, often leading to challenges in treatment efficacy and patient satisfaction, and in some cases contributing to orofacial dyspraxia[11].

In recent years, multiple etiological hypotheses have been proposed for temporomandibular disorders (TMDs), encompassing neurological, psychological, parafunctional, traumatic, and cognitive factors[12,13]. This lack of definitive understanding contributes to the complexity of TMD management[9,14]. Current professional consensus supports a multidisciplinary approach, involving collaboration among dentists,speech therapists, physiotherapists and oral surgeons[15]. Such interprofessional cooperation allows practitioners to integrate diverse expertise, thereby offering comprehensive and individualized patient care[16].

Among conservative interventions, physiotherapy—including postural re-education, jaw and cervical exercises, manual therapy and behavioral strategies has been identified as non-invasive and the most cost-effective treatment option for TMD [17,18]. Physiotherapeutic management not only alleviates pain and functional limitations but also promotes long-term improvement in quality of life [19]. Moreover, by addressing associated musculoskeletal structures, physiotherapy enables a holistic and integrative approach to patient management [11].

To optimize clinical outcomes, effective collaboration between physiotherapists and dentists is essential[19,20,21]. Although interprofessional education and training initiatives have been introduced to foster such cooperation[21,22], in practice, collaboration remains limited, with insufficient awareness among dentists regarding timely referral to physiotherapists[23].

The limited integration of cross-disciplinary skills in initial training necessitates a review of existing inter-professional collaboration (IPC) between dental practitioners and physiotherapists. The objective of this study is to assess the treatment support dentists provide for Temporomandibular Disorder (TMD) within this IPC framework, and to recommend actionable improvements for enhanced collaboration.[23.]

OBJECTIVES:

AIM: To assess the current level of interprofessional collaboration between dentists and physiotherapists in the management of temporomandibular disorders (TMDs) and to identify barriers influencing effective cooperation.

Journal of Chemical Health Risks
www.jchr.org
JCHR (2026) 16(2), 2130-2135 | ISSN:2251-6727

OBJECTIVES:

1. To evaluate the awareness of dentists regarding the role of physiotherapy in the management of temporomandibular disorders.
2. To analyze the referral patterns of dentists for physiotherapy in TMD cases.
3. To identify common treatment methods adopted by dentists in managing TMD.
4. To determine the main barriers hindering interprofessional collaboration between dentists and physiotherapists.
5. To suggest strategies for improving interdisciplinary communication and establishing structured referral protocols for better patient outcomes.

HYPOTHESIS:

NULL HYPOTHESIS (H_0):

There is no significant level of interprofessional collaboration between dentists and physiotherapists in the management of temporomandibular disorders (TMD).

ALTERNATIVE HYPOTHESIS (H_1):

There is a significant level of interprofessional collaboration between dentists and physiotherapists in the management of temporomandibular disorders (TMD).

METHODS:

STUDY DESIGN: A cross-sectional survey study is conducted online, using Google Forms system.

STUDY SETTING AND DURATION: The study was entirely conducted online during the month of September to November.

SAMPLE SIZE: 83 responses included

INCLUSION CRITERIA:

1. Graduate Oral healthcare professionals
2. Both females and males
3. Currently practicing in hospitals,clinics or colleges
4. Involved in the diagnosis and/or management of temporomandibular disorders (TMD)
5. Willing to participate voluntarily in the online survey

EXCLUSION CRITERIA:

1. Retired professionals
2. Students still pursuing their studies
3. Other healthcare students
4. Those unwilling to participate
5. Who did not complete the questionnaire

METHODOLOGY
QUESTIONNAIRE:

The questionnaire used in this study was carefully developed following a detailed review of 20 national and international research articles focusing on temporomandibular disorders (TMD), physiotherapy interventions, and interprofessional collaboration between healthcare professionals. Based on insights gained from the literature, a structured 15-item questionnaire was designed to assess dentists' awareness, clinical evaluation practices, treatment approaches, referral patterns, and perceived barriers to collaboration with physiotherapists. To ensure its validity and reliability, the questionnaire was reviewed and validated by eight subject experts representing various dental and physiotherapy specialties, including orthodontics, prosthodontics, endodontics, periodontics, oral surgery, pedodontics, oral medicine and radiology, and physiotherapy. The experts evaluated the content for clarity, relevance, and comprehensiveness, and their feedback was incorporated to refine the questionnaire. A pilot test was conducted among a small group of professionals to confirm the clarity and consistency of responses. After final modifications, the questionnaire was converted into a Google Form and hard copy and circulated through professional networks and social media platforms across eight Indian states—Karnataka, Maharashtra, Tamil Nadu, Gujarat, Delhi, West Bengal, Kerala, and Telangana—to collect a wide range of responses representing diverse clinical settings and professional experiences.

Journal of Chemical Health Risks

www.jchr.org

JCHR (2026) 16(2), 2130-2135 | ISSN:2251-6727

QUESTIONNAIRE FORM:

"Temporomandibular Dysfunction Interdisciplinary Referral Questionnaire (TMDIRQ)"

General Instructions for participants:

1. This questionnaire is intended only for qualified dental professionals (Bachelor's or Master's degree holders in Dentistry).
2. Participation in this survey is voluntary, and you may choose to withdraw at any time without any consequences.
3. All responses will be kept confidential and anonymous and will be used strictly for academic and research purposes.
4. Please answer all questions honestly and based on your clinical experience with patients having temporomandibular disorders (TMD).
5. For questions with multiple options, you may **select more than one response** where applicable.
6. By completing this questionnaire, you **consent to participate** in this research study.

ANNEXURE:

Section A: General Information

1. Name:
2. Age (in years):
3. Highest Level of Dentist degree completed:

☐ Bachelor's Degree

☐ Master's Degree

4. Do you currently practice in:

☐DentalCollege

☐ Clinic

☐ Hospital

5. Name of Clinic/College:
6. Which title best describes you:

☐ General Dentist

☐ Orthodontist

☐ Endodontist

☐ Prosthodontist

☐ Periodontist

☐ Oral Surgeon

☐ Other:

Section B: Clinical Experience with TMD

7. What types of TMJ disorders you have had evaluated/treated: *(you may select more than one)*

☐ Trauma from occlusion

☐ Internal derangement

☐ Parafunctional habits (e.g., bruxism)

☐ TMJ disc displacement

☐ Degenerative disorders (e.g., RA)

☐ TMJ hypomobility / limited mouth opening

☐ TMJ hypermobility

☐ Muscle tightness / tender points

☐ Headaches

☐ Never treated TMJ patients

☐ Other: _____

8. From the options below, what do you normally include in the evaluation of these patients: *(you may select more than one)*

☐ Dental occlusion

☐ Signs of parafunctional habits

☐ Mouth opening (3 or 4 finger test)

☐ TMJ sounds

☐ Jaw movement assessment

☐ Masticatory muscle palpation

☐ TMJ palpation

☐ Other: _____

9. What Stage of the disorder have most of your patients with TMJ disorder presented with during evaluation:

☐ Acute

☐ Subacute

☐ Chronic

10. Does any of the conditions below were present in your patients with TMJ disorder during evaluation: *(you may select more than one)*

☐ Neck pain

☐ Poor posture

☐ Cervicogenic headache

☐ None

Journal of Chemical Health Risks
www.jchr.org
JCHR (2026) 16(2), 2130-2135 | ISSN:2251-6727

Section C: Management Approach

11. When treating patients with TMJ disorders, what method do you normally use?: *(you may select more than one)*

☐ Bite splints / occlusal guards
☐ Occlusion correction
☐ Medication prescription
☐ Other:

Section D: Interprofessional Collaboration

12. Do you refer TMJ patients to other healthcare professionals?

☐ Yes
☐ No

13. If yes, which healthcare provider/speciality do you refer to specifically? *(you may select more than one)*

☐ General Dentist
☐ Orthodontist
☐ Endodontist
☐ Prosthodontist
☐ Periodontist
☐ Oral Surgeon
☐ Physiotherapist
☐ Physician
☐ Psychologist
☐ Speech Therapist
☐ Other:

Section E: Physiotherapy Referral

1. If you had referred a patient with TMJ disorder to a physical therapist, what would be the reasons for the referral: *(you may select more than one)*

☐ Loss of jaw movement
☐ Masticatory muscle tenderness
☐ Headaches
☐ Neck pain
☐ Postural alterations (e.g., forward head posture)
☐ Never referred
☐ Other:

1. If you have never referred a patient with TMJ related problem to a physical therapist, what is/are the reasons: *(you may select more than one)*

☐ Limited collaboration between dentist & physiotherapist
☐ Accessibility issues
☐ Lack of referral guidelines/protocols
☐ Lack of awareness about physiotherapy role
☐ Always refer patients

DATA COLLECTION:

The cross- sectional survey used Google Forms for the research, which has been provided through Whatsapp and social media groups. In order to protect participants' privacy, the questionnaire was intended for anonymous collection of information. The survey is based on a questionnaire. The questionnaire consisted of several sections including the demographic data section which include the name, age, education status.

STATISTICAL ANALYSIS:

TABLE NO. 1:
Highest level of dentist degree completed?

QUALIFICATION LEVEL	NO. OF RESPONDENTS (n)	PERCENTAGE%
BACHLORES	**67**	**81.70%**
MASTERS	**15**	**18.30%**

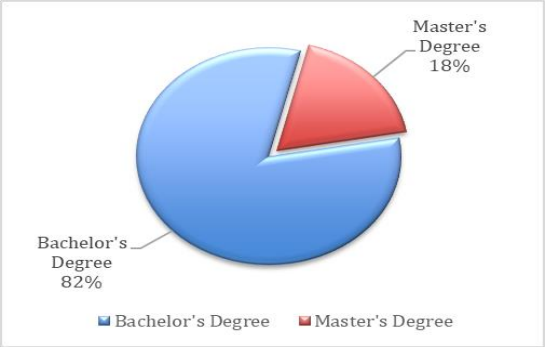

Fig:1: A pie-chart showing the distribution of the Degree.

The pie chart shows the academic qualification of respondents, showing that a majority (81.7%) hold a

Journal of Chemical Health Risks
www.jchr.org
JCHR (2026) 16(2), 2130-2135 | ISSN:2251-6727

Bachelor's degree, while 18.3% possess a Master's degree. This indicates that most participants are graduates at the undergraduate level.

TABLE NO. 2:

SPECIALITY/ DESIGNATION	NO. OF RESPONDENTS (n)	PERCENTAGE%
GENERAL DENTISTS	45	59.2
ORTHODONTISTS	11	14.5
ENDODONTISTS	4	5.3
PROSTHODONTISTS	2	2.6
PERIODONTISTS	2	2.6
ORAL SURGEON	3	3.9
PEDODONTISTS	2	2.6
ORAL MAXILLOFASCIAL RADIOLOGIST	1	1.3
INTERN	1	1.3
OTHER	4	4.12

Do you currently practice in college/ clinic?

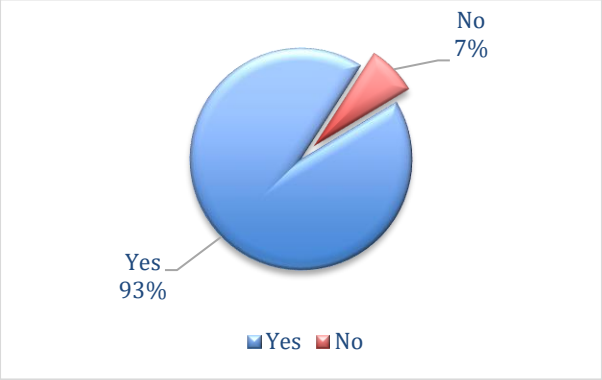

Fig:2: A pie-chart showing the distribution of working professionals

The pie-chart shows the employment status of respondents, revealing that 92.7% are currently in professional practice, while only 7.3% are not. This indicates that the majority of participants are active working professionals.

TABLE NO. 3:

PRACTICE STATUS	NO OF RESPONDENTS (n)	PERCENTAGE %
YES	76	92.70%
NO	6	7.30%

Which title best describes you?

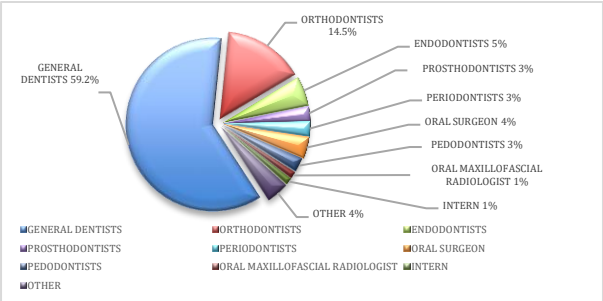

Fig:3: A pie-chart showing the distribution of Educational level.

The pie-chart represents the education level of respondents, showing that the majority (59.2%) are general dentists, followed by orthodontists (14.5%) and other dental specialists in smaller proportions. This indicates that most participants are general practitioners with diverse specialist representation.

TABLE NO. 4:

What type of TMJ disorder you have had evaluated and/ or treated?

TYPE OF DISORDERS	NO.OF RESPONDENTS (n)	PERCENTAGE %
TRAUMA FROM OCCLUSION	37	48.7

Journal of Chemical Health Risks
www.jchr.org
JCHR (2026) 16(2), 2130-2135 | ISSN:2251-6727

INTERNAL DERANGEMENTS OF JOINTS	**9**	**11.8**
PARAFUNCTION HABITS	**31**	**40.8**
TMJ DISC DISPLACEMENTS	**19**	**25**
DEGENERATIVE DISORDERS(RA)	**9**	**11.8**
TMJ HYPOMOBILITY	**19**	**25**
TMJ HYPERMOBILITY	**11**	**14.5**
MUSCLE TIGHTNESS	**31**	**40.8**
HEADACHES	**27**	**35.5**
NEVER EVALUATED OR TREATED	**9**	**11.8**
OTHER	**2**	**2.6**

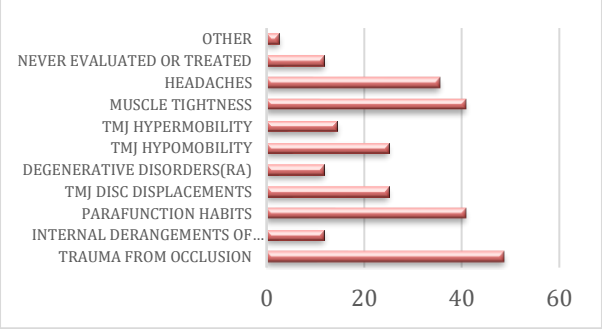

Fig:4: A bar-chart showing the distribution of different disorders.

The bar-chart showing the distribution of temporomandibular disorders among respondents, showing that trauma from occlusion (48.7%), parafunctional habits (40.8%), and muscle tightness (40.8%) are the most commonly reported issues. This indicates that functional and muscular factors are the predominant contributors to TMJ-related problems.

TABLE NO. 5:

STAGE OF DISORDER	No. OF RESPONDENTS (n)	PERCENTAGE %
ACUTE	**35**	**46.1**
SUBACUTE	**24**	**31.6**
CHRONIC	**17**	**22.4**

From the options below, what do you normally include in the evaluation of these patients?

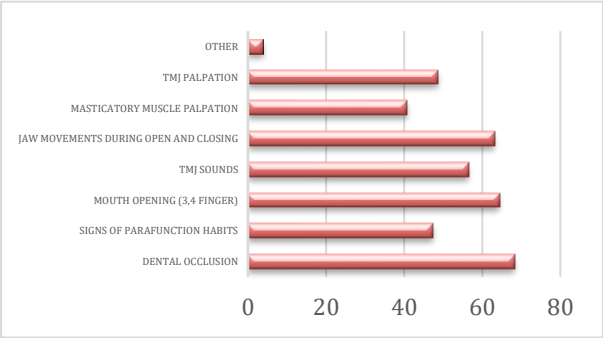

Fig:5: A bar-chart showing the distribution of evaluation of TMJ.The bar chart shows the evaluation parameters ed for TMJ assessment, with dental occlusion (68.4%), mouth opening (64.5%), and jaw movement observation (63.2%) being the most commonly assessed factors. This highlights that clinicians primarily focus on functional and occlusal aspects during TMJ evaluation.

TABLE NO. 6:

EVALUATION PARAMETER	NO. OF RESPONDENTS (n)	PERCENTAGE%
DENTAL OCCLUSION	**52**	**68.4**

Journal of Chemical Health Risks
www.jchr.org
JCHR (2026) 16(2), 2130-2135 | ISSN:2251-6727

SIGNS OF PARAFUNCTION HABITS	36	47.4
MOUTH OPENING (3,4 FINGER)	49	64.5
TMJ SOUNDS	43	56.6
JAW MOVEMENTS DURING OPEN AND CLOSING	48	63.2
MASTICATARY MUSCLE PALPATION	31	40.8
TMJ PALPATION	37	48.7
OTHER	3	3.9

What stage of the disorder have most of your patients with TMJ disorder presented with during evaluation?

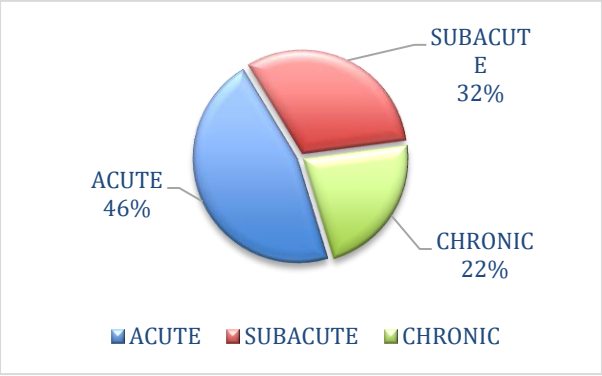

Fig:6: A pie-chart showing the distribution of different stages of disorders.

The pie chart depicts the distribution of disorder stages, showing that most respondents (46.1%) experience acute conditions, followed by subacute (31.6%) and chronic stages (22.4%). This indicates that the majority of cases are identified in the early or active phase of the disorder.

TABLE NO. 7:

CONDITION EVALUATED	NO. OF RESPONDENTS	YES	NO	NEVER EVALUATED
NECK PAIN	78	44	20	14
POOR POSTURE	78	28	28	22
CERVICOGENIC HEADACHE	78	37	23	18

Does any of the conditions below were present in your patients with TMJ disorder during evaluation?

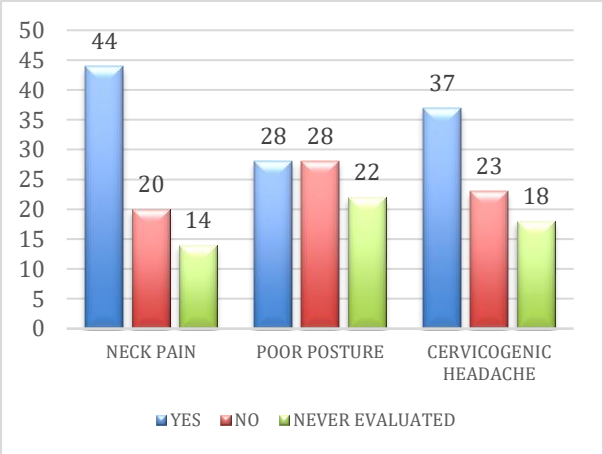

Fig:7: A bar-chart showing the distribution of different conditions present in patients with TMJ disorders during evaluation

The bar chart shows the presence of associated conditions in TMJ disorder patients, revealing that neck pain (56.4%) and cervicogenic headaches (47.4%) are frequently observed, while poor posture (35.9%) is also common. This suggests a strong correlation between TMJ dysfunction and cervical musculoskeletal involvement.

Journal of Chemical Health Risks
www.jchr.org
JCHR (2026) 16(2), 2130-2135 | ISSN:2251-6727

TABLE NO. 8:
When treating patients with TMJ disorders, what methods do you normally use?

TREATMENT METHODS	NO. OF RESPONDENTS (n)	PERCENTAGE %
BITE SPLINTS/OCCLUSAL GUARDS	47	61.8
OCCLUSION CORRECTIONS	48	63.2
MEDICATIONS	40	52.6
OTHERS	6	7.8

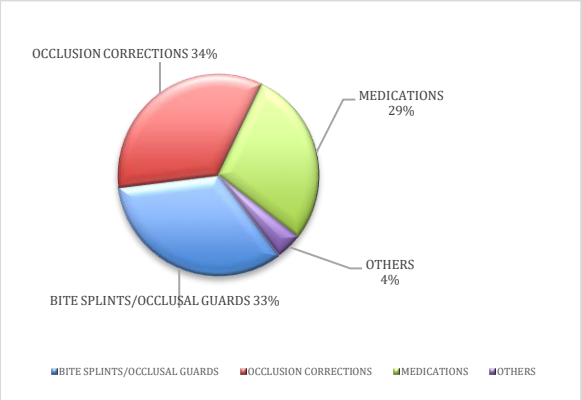

Fig:8: A bar-chart showing the distribution of methods used for treating the patients.

The bar chart illustrates the treatment methods used for TMJ patients, showing that occlusion correction (63.2%) and bite splints or occlusal guards (61.8%) are the most common approaches, followed by medications (52.6%). This indicates a preference for conservative and occlusal-based management strategies among practitioners.

TABLE NO. 9:
Do you refer patients with TMJ disorder to other practitioners?

REFERRAL STATUS	NO. OF RESPONDENTS (n)	PERCENTAGE%
YES	59	77.6
NO	17	22.4

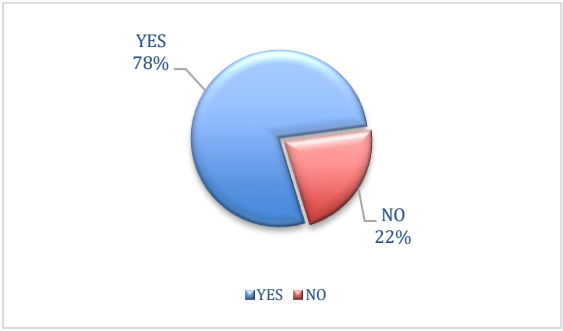

Fig:9: A pie-chart showing the distribution of referring patients to other practitioners.

The pie chart depicts the referral pattern of practitioners, showing that 77.6% refer TMJ patients to other professionals, while 22.4% manage them independently. This highlights a strong tendency toward interprofessional collaboration in TMJ management.

TABLE NO. 10:

SPECIALITY REFERRED TO	NO. OF RESPONDENTS (n)	PERCENTAGE%
GENERAL DENTISTS	11	18.6
ORTHODONTISTS	12	20.3
ENDODONTIST	1	1.7
PROSTHODONTISTS	8	13.6

Journal of Chemical Health Risks
www.jchr.org
JCHR (2026) 16(2), 2130-2135 | ISSN:2251-6727

PERIODONTISTS	**1**	**1.7**
ORAL SURGEON	**39**	**66.1**
PHYSIOTHERAPIST	**37**	**62.7**
PHYSICIAN	**8**	**13.6**
PSYCHOLOGIST	**8**	**13.6**
SPEECH PATHOLOGIST	**2**	**3.4**
OTHERS	**5**	**8.5**

Which healthcare provider/specialty do you refer to specifically?

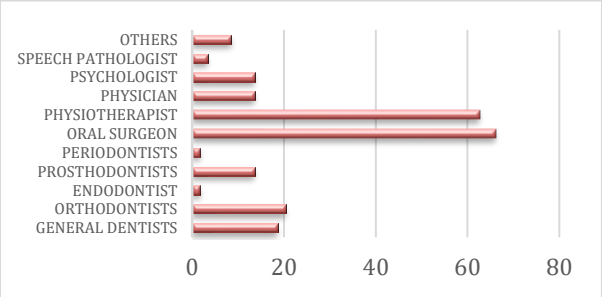

Fig:10: A bar-chart showing the distribution of referring patients to other practioners.

The bar chart illustrates the specialties to whom TMJ patients are commonly referred, with oral surgeons (66.1%) and physiotherapists (62.7%) being the primary choices. This indicates that dentists predominantly collaborate with surgical and rehabilitative professionals for comprehensive TMJ management.

TABLE NO. 11:

If you had referred a patient with TMJ disorder to a physical therapist, what would be the reasons for the referral?

PATIENT SYMPTOMS/ REASON FOR REFERRAL	**NO. OF RESPONDENTS (n)**	**PERCENTAGE%**
LOSS OF JAW MOVEMENT	**23**	**39**
MASTICATORY MUSCLE TENDERNESS	**33**	**55.9**
HEADACHES	**16**	**27.1**
NECK PAIN	**34**	**57.6**
POSTURAL ALTERATION	**26**	**44.1**
NEVER REFERRED TO PHYSIOTHERAPIST	**10**	**16.9**
OTHER	**3**	**5.1**

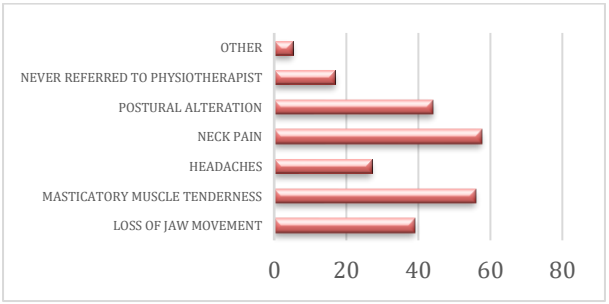

Fig:11: A bar-chart showing the distribution of reasons for the reffering patients to the physiotherapist.

The bar chart illustrates the reasons for referring patients to physiotherapists, showing that neck pain (57.6%) and masticatory muscle tenderness (55.9%) are the most common symptoms, followed by postural alterations (44.1%). This indicates that musculoskeletal and postural issues are the primary factors prompting physiotherapy referrals in TMJ cases.

Journal of Chemical Health Risks
www.jchr.org
JCHR (2026) 16(2), 2130-2135 | ISSN:2251-6727

TABLE NO.12:

REASON FOR NON-REFERRAL	NO. OF RESPONDENTS (n)	PERCENTAGE %
LIMITED COLLABORATION BETWEEN DENTIST AND PHYSIOTHERAPIST	4	23.5
ACCESSIBILITY ISSUES	2	11.8
LACK OF REFERRAL GUIDELINE/PROTOCOL	1	5.9
LACK OF AWARENESS ABOUT PHYSIOTHERAPY ROL IN TMJ DISORDERS	7	41.2
I ALWAYS REFER PATIENTS	1	5.9
OTHER	2	11.8

If you have never referred a patient with TMJ related problem to a physical therapist, what is/are the reasons?

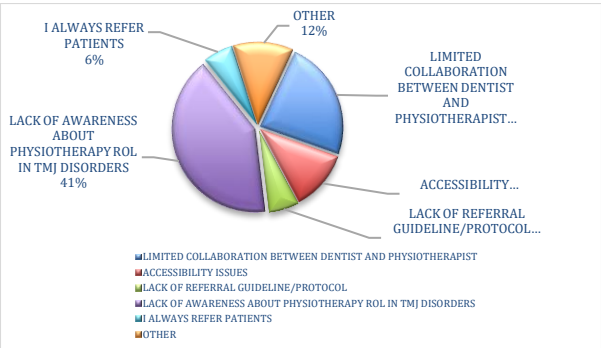

Fig:12: A pie-chart showing the distribution of reasons for not referring patients to the physiotherapist.

The pie chart shows the reasons for not referring patients to physiotherapists, revealing that the main barrier is a lack of awareness about physiotherapy's role in TMJ disorders (41.2%), followed by limited collaboration between dentists and physiotherapists (23.5%). This indicates a need for better interdisciplinary communication and education regarding physiotherapy's contribution to TMJ management.

RESULTS:

A total of 82 dental practitioners participated in the survey. Among them, 81.7% held a Bachelor's degree, and 18.3% held a Master's degree (Table 1, Fig. 1). A majority of respondents (92.7%) were actively practicing (Table 2, Fig. 2), and most participants were general dentists (59.2%), followed by orthodontists (14.5%) and other dental specialists in smaller proportions (Table 3, Fig. 3). Regarding the types of temporomandibular disorders (TMD) encountered, trauma from occlusion (48.7%), parafunctional habits (40.8%), and muscle tightness (40.8%) were the most frequently reported conditions (Table 4, Fig. 4). In terms of assessment, the most common evaluation parameters included dental occlusion (68.4%), mouth opening (64.5%), and jaw movement observation (63.2%) (Table 5, Fig. 5). The majority of respondents identified disorders in the acute stage (46.1%), followed by subacute (31.6%) and chronic (22.4%) cases (Table 6, Fig. 6). Associated conditions such as neck pain (56.4%), cervicogenic headaches (47.4%), and poor posture (35.9%) were frequently observed during evaluation (Table 7, Fig. 7). The most commonly adopted treatment approaches were occlusal correction (63.2%), bite splints or occlusal guards (61.8%), and medication (52.6%) (Table 8, Fig. 8). A significant proportion of dentists (77.6%) referred TMD patients to other healthcare professionals (Table 9, Fig. 9). The primary referral destinations were oral surgeons (66.1%) and physiotherapists (62.7%), followed by physicians and prosthodontists (Table 10, Fig. 10). The major reasons for referring patients to physiotherapists included neck pain (57.6%), masticatory muscle tenderness (55.9%), and postural alterations (44.1%) (Table 11, Fig. 11). Among those who did not refer patients to physiotherapists, the most frequently cited barriers were lack of awareness about physiotherapy's role in TMD management (41.2%), followed by limited collaboration (23.5%) and accessibility issues (11.8%) (Table 12, Fig. 12). So the study shows that majority dentists referred patients to physiotherapists and oral surgeons. Most dentists treated TMD patients using simple methods like bite splints and occlusion correction. Many referred patients to physiotherapists and oral surgeons, but some did not because they were unaware of physiotherapy's role.

Journal of Chemical Health Risks

www.jchr.org

JCHR (2026) 16(2), 2130-2135 | ISSN:2251-6727

DISCUSSION:

The present study aimed to assess the level of interprofessional collaboration between dentists and physiotherapists in the management of temporomandibular disorders (TMD). The findings revealed that most respondents were general dentists with a bachelor's degree who were actively practicing, indicating that the sample primarily represented frontline dental professionals involved in clinical care. The predominance of general dentists (59.2%) reflects their pivotal role in the first-line diagnosis and management of TMD, consistent with existing literature highlighting dentists as the initial point of patient contact for orofacial pain disorders.

The most frequently reported TMD conditions included trauma from occlusion, parafunctional habits, and muscle tightness, which aligns with studies emphasizing occlusal and muscular etiologies as major contributors to TMJ dysfunction. The high reporting of parafunctional habits suggests that behavioral and stress-related components play a key role in the onset of TMD symptoms. Moreover, the predominance of acute-stage disorders (46.1%) indicates that most patients seek treatment during the early phase of dysfunction, allowing for greater effectiveness of conservative management strategies.Regarding evaluation, the majority of dentists assessed dental occlusion, mouth opening, and jaw movement, reflecting a focus on functional and structural examination. However, fewer practitioners assessed masticatory muscle palpation or cervical involvement, indicating limited attention to musculoskeletal and postural factors. This may be due to insufficient interdisciplinary training in biomechanical and physiotherapeutic assessment techniques during dental education.

The presence of associated conditions such as neck pain (56.4%), cervicogenic headaches (47.4%), and poor posture (35.9%) reinforces the close anatomical and functional relationship between the TMJ and cervical spine. These findings support previous research that advocates for a multidisciplinary approach involving physiotherapy to address musculoskeletal and postural imbalances contributing to TMD symptoms.

In terms of treatment, most respondents used occlusal correction, bite splints, and medications, which demonstrates reliance on conservative, dental-based modalities. These approaches are effective for symptom relief but may not fully address the underlying muscular or postural dysfunctions, thereby necessitating physiotherapy intervention.

A significant proportion of respondents (77.6%) referred patients to other healthcare professionals, most commonly oral surgeons (66.1%) and physiotherapists (62.7%). This reflects a positive trend toward interprofessional collaboration. The preference for physiotherapy referrals highlights growing recognition of its role in pain management, muscle relaxation, and postural correction. However, the study also identified notable barriers to referral, such as lack of awareness about physiotherapy's role (41.2%), limited collaboration (23.5%), and accessibility issues (11.8%). These barriers suggest that although dentists acknowledge the importance of physiotherapy, there remains a gap in knowledge, communication, and structured referral pathways between both professions.

The results are consistent with previous studies (e.g., Gadotti et al., 2018; Garrigós-Pedrón et al., 2019), which reported insufficient interprofessional coordination despite mutual recognition of each discipline's contribution to TMD management. Such gaps are often attributed to limited exposure to interdisciplinary education during professional training and the absence of standardized clinical protocols.

Overall, this study underscores the need to enhance interprofessional education, communication, and collaborative frameworks between dentists and physiotherapists. Implementing structured referral guidelines, conducting joint clinical workshops, and integrating interdisciplinary modules into professional curricula can significantly improve collaborative practice and lead to more comprehensive and effective management of TMD.

LIMITATION AND SUGGESTIONS:

Limitations:

The study had a limited sample size and included only dental practitioners, which may not represent all professionals involved in TMD management. Data were collected through a self-reported online

Journal of Chemical Health Risks

www.jchr.org

JCHR (2026) 16(2), 2130-2135 | ISSN:2251-6727

survey, which could introduce response bias.

Suggestions:

Future studies should include both dentists and physiotherapists to gain a broader understanding of collaboration. Increasing awareness through interprofessional workshops, continuing education programs, and developing standardized referral protocols are recommended to strengthen interdisciplinary practice.

CONCLUSION:

The study concludes that while most dental practitioners adopt conservative approaches such as occlusion correction and bite splints for managing temporomandibular disorders, there is a growing recognition of the importance of interprofessional collaboration. A majority of dentists refer patients to physiotherapists and oral surgeons, acknowledging the role of physiotherapy in improving functional outcomes. However, limited awareness and lack of standardized referral protocols remain major barriers to effective teamwork. Enhancing communication, education, and collaborative training between dentists and physiotherapists can significantly improve the quality of care and lead to better outcomes for patients with TMD.

CONFLICT OF INTEREST:

The authors declare that there is no conflict of interest regarding the publication of this research study.

ACKNOWLEDGEMENTS:

The authors would like to express their sincere gratitude to **Garden City University, Bengaluru**, for providing constant support and encouragement throughout the study. Special thanks are extended to all the **dentists and professionals** who participated in the survey for their valuable time and contributions. The authors also wish to acknowledge the guidance and mentorship of **Prof. Pinky Dutta**, Head of the Physiotherapy Department, for her invaluable insights and continuous encouragement during the course of this research.

REFERENCES:

1. Smékal D, Velebová K, Hanáková D, et al. The effectiveness of specific physiotherapy in the treatment of temporomandibular disorders. Acta Univ Palacki Olomuc 2008 Aug;38(2):45–53.
2. Martins WR, et al., Efficacy of musculoskeletal manual approach in the treatment of temporomandibular joint disorder: A systematic review with meta-analysis, Manual Therapy (2015),(Site)
3. Shalender Sharma, D. S. Gupta, U. S. Pal, Sunit Kumar Jurel Etiological factors of temporomandibular joint disorders.National Journal of Maxillofacial Surgery | Vol 2 | Issue2 | Jul-Dec 2011 |DOI:10.4103/0975-5950.94463(Journal)
4. Emily Kahnert1, Janey Prodoehl2 Temporomandibular disorders associated with orotracheal intubation procedures: a narrative review.https://dx.doi.org/10.21037/joma-23-38
5. Ehrmann E, Azan C, Savoldelli C, Laplanche O. Dysfonctionnements temporomandibulaires: éléments de diagnostic. EMC - Médecine Buccale. 2019;14(4):1–14.
6. Salinas Fredricson A, Krüger Weiner C, Adami J, Rosén A, Lund B, Hedenberg-Magnusson B, et al. Sick leave and disability pension in a cohort of TMD-patients – the Swedish National Registry studies for surgically treated TMD (SWEREG-TMD). BMC Public Health. 2022;22(1):916.
7. Schiffman E, Ohrbach R, Truelove E, Look J, Anderson G, Goulet JP, et al. Diagnostic criteria for Temporomandibular disorders (DC/TMD) for clinical and research applications: recommendations of the International RDC/ TMD consortium network* and orofacial pain special interest group†. J Oral Facial Pain Headache. 2014;28(1):6–27.
8. Gil-Martinez A, Paris-Alemany A, López-de-Uralde-Villanueva I, La Touche R. Management of pain in patients with temporomandibular disorder (TMD): challenges and solutions. J Pain Res. 2018;11:571–87.
9. Hebting JM, Ferrand G, Hebting K. Kinésithérapie De La face, Du crâne et du cou. Issy-les-Moulineaux: Elsevier-Masson; 2015.
10. Gadotti IC, Hulse C, Vlassov J, Sanders D, Biasotto-Gonzalez DA. Dentists' awareness of

Journal of Chemical Health Risks

www.jchr.org

JCHR (2026) 16(2), 2130-2135 | ISSN:2251-6727

physical therapy in the treatment of temporomandibular disorders: a preliminary study. Pain Res Manag. 2018;2018:1–8.

11. Breton-Torres I, Yong-Wai-Man E, Jammet P, Trichot S, Lefebvre C, Mura T, et al. Prévalence des dyspraxies orofaciales dans les dérangements temporo mandibulaires, proposition de prise en charge rééducative. Kinésithérapie Rev. 2018;18:4–11.

12. Aguila M, Benichou M, Hennequin A, Grégoire G, Destruhaut F. Temporomandibular disorders, and benefits of a cervical therapeutic approach in facial myalgia treatment: a review of the literature. Oral Health Care. 2019;4:1–6.

13. Felin GC, Tagliari CV, da Agostini C, Collares BA. Prevalence of psychological disorders in patients with temporomandibular disorders: A systematic review and meta-analysis. J Prosthet Dent. 2024;132:392–401.

14. Okeson JP. Management of temporomandibular disorders and occlusion. 8th ed. St. Louis:Mosby; 2020.

15. Garrigós-Pedrón M, Elizagaray-García I, Domínguez-Gordillo AA, DelCastillo-Pardo-de-Vera JL, Gil-Martínez A. Temporomandibular disorders: improving outcomes using a multidisciplinary approach. J Multidiscip Healthc. 2019;12:733–47.

16. Calixtre LB, Oliveira AB, de Sena Rosa LR, Armijo-Olivo S, Visscher CM, Alburquerque-Sendín F. Effectiveness of mobilisation of the upper cervical region and craniocervical flexor training on orofacial pain, mandibular function and headache in women with TMD. A randomised, controlled trial. J Oral Rehabil. 2019;46(2):109–19.

17. Breton-Torres I, Serre M, Jammet P, Yachouh J. Dysfonction De L'appareil manducateur: apport de la prise en charge rééducative. Orthod Fr. 2016;87:329–39.

18. Herrera-Valencia A, Ruiz-Muñoz M, Martin-Martin J, Cuesta-Vargas A, González-Sánchez M. Efficacy of manual therapy in temporomandibular joint disorders and its medium-and long-term effects on pain and maximum mouth opening: a systematic review and meta-analysis. J Clin Med. 2020;9(11):3404.

19. Van Grootel RJ, Buchner R, Wismeijer D, van der Glas HW. Towards an optimal therapy strategy for myogenous TMD, physiotherapy compared with occlusal splint therapy in an RCT with therapy-and-patient-specific treatment durations. BMC Musculoskelet Disord. 2017;18(1):76.

20. Shimada A, Ishigaki S, Matsuka Y, Komiyama O, Torisu T, Oono Y, et al. Effects of exercise therapy on painful temporomandibular disorders. J Oral Rehabil. 2019;46(5):475–81.

21. Chapron A, Metten MA, Maury A, Prestel T, Bajeux E, Andres É, et al. Service sanitaire des étudiants en santé: ancrer l'éducation pour la santé dans le cursus des étudiants. Santé Publique. 2021;33(3):407–13.

22. Van Diggele C, Roberts C, Burgess A, Mellis C. Interprofessional education: tips for design and implementation. BMC Med Educ. 2020;20(S2):455.

23. Moleirinho-Alves P, Cebola P, Melo X, Simões S, Godinho C. Analysis of Portuguese physiotherapists' self-knowledge on temporomandibular disorders. Int J Environ Res Public Health. 2023;20(2):1294.