

## Original Research

### Assessment of different Temporomandibular joint disorders among known population

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#### ABSTRACT:

**Background:** Temporomandibular Joint disorders are defined as heterogeneous group of psychological disorders, commonly characterized by orofacial pain, chewing dysfunction, or both. The present study was conducted to assess the prevalence of different Temporomandibular joint disorders among known population. **Material and methods:** The present study was conducted among 60 patients that attended the dental clinic for dental treatment underwent the routine examination of the TMJ, such as clicking, crepitation, limitation or deviation during mouth opening, and pain. It was done by individually examining each patient, taking a thorough history, and filling out a questionnaire for each patient, respectively. Physical examination of the collected sample was done. Along with the clinical examination of the patient, the aid of radiographs (if necessary) was also taken. Statistical analysis was done by using SPSS, version 22 (SPSS, Inc., Chicago, IL) and  $p < 0.05$  was considered statistically significant. **Results:** The present study was conducted among 60 patients. Presence of Temporomandibular disorders among male was 36(60%) and females 24(40%). Myofacial pain was the most common condition present among the population. **Conclusion:** The present study concluded that temporomandibular disorders were more common in males and the most prevalent disorder among population was Myofacial Pain.

**Key words:** Temporomandibular Joint disorders, orofacial pain.

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#### INTRODUCTION:

Temporomandibular joint disorders are considered as the common cause of orofacial pain of non dental origin.<sup>1</sup> Thus, it is an enigmatic issue as it has deleterious effects on the stomatognathic system.<sup>2</sup> The common symptoms of Temporomandibular joint disorders are muscle and/or joint pain on palpation, impaired mandibular function, and joint noises.<sup>3</sup> Temporomandibular joint disorders is a collective term that describes a sub-group of painful oro-facial disorders, involving complaints of pain on the TMJ region and fatigue of the cranio-cervicofacial muscles, especially mastication muscles, limitation of mandibular movement and presence of articular clicking. However, it is generally assumed that Temporomandibular joint disorders would mainly affect adult patients; nevertheless, children have also shown a similar incidence of signs and symptoms.<sup>4</sup> Emotional stress, occlusal interferences,

malpositioning or loss of teeth, postural changes, dysfunctions of the masticatory musculature and adjacent structures, extrinsic and intrinsic changes on TMJ structure and/or a combination of such factors are causes of Temporomandibular joint disorders.<sup>5</sup> The prevalence is estimated between 5% and 12% and prevalence rates of Temporomandibular joint disorders are higher among younger persons. These disorders are at least twice as prevalent in women as men.<sup>6</sup> The present study was conducted to assess the prevalence of different Temporomandibular joint disorders among known population.

#### MATERIAL AND METHODS:

The present study was conducted among 60 patients that attended the dental clinic for dental treatment underwent the routine examination of the TMJ, such as clicking, crepitation, limitation or deviation during mouth opening,

and pain. It was done by individually examining each patient, taking a thorough history, and filling out a questionnaire for each patient, respectively. Physical examination of the collected sample was done in two ways:(1)Lateral position: assessment of mandibular condylar movement by direct palpation over the joint while the patient opens and closes the mandible, at the preauricular area;(2)Posterior position: assessment of mandibular condylar movement by direct palpation of the mandibular condyle while the patient opens and closes the mandible, through the external auditory meatus.A mandibular opening less than 35 mm (the distance between the edges of upper and lower incisors) is considered in our study as restriction of mouth opening.A thorough history was collected from the samples on any history of previous trauma to the head and neck region, any previous long dental appointments that could be the reason for any of the TMJ disorders, or any habits or any occupation-related habits that could precipitate a Temporomandibular disorders. Along with the clinical examination of the patient, the aid of radiographs (if necessary) was also taken. Statistical analysis was done by using SPSS, version 22 (SPSS, Inc., Chicago, IL) and p<0.05 was considered statistically significant.

**RESULTS:**

The present study was conducted among 60 patients. Presence of Temporomandibular disorders among male was 36(60%) and females 24(40%). Myofacial pain was the most common condition present among the population.

**Table 1:** Distribution of Temporomandibular disorders according to gender

Gender	N(%)	p-value
Male	36(60%)	<0.05
Female	24(40%)	
Total	60(100%)	

**Table 2:** Distribution of different Temporomandibular disorders

Temporomandibular joint disorders	N
<b>Muscle disorders</b>	
Myofacial pain	28
Myositis	3
Myospasm	2
<b>TMJ disorders</b>	
Inflammatory conditions	8
Osteoarthritis	6
TMJ dislocation	4
Disc displacement without reduction	3
Disc displacement with reduction	6
Total	60

**DISCUSSION:**

One important cause for chronic facial pain is TMDs. The term TMD has been described as a cluster of disorders characterized by pain in the preauricular area, TMJ, or the

masticator muscles; limitation or deviations in mandibular range of motion; and clicking in the TMJ during mandibular function, and they are not related to growth or developmental disorders, systemic diseases, or macrotrauma.<sup>7</sup> The present study was conducted among 60 patients. Presence of Temporomandibular disorders among male was 36(60%) and females 24(40%). Myofacial pain was the most common condition present among the population. Lee et al. reported in their study, the predominance of the male with TMJ disorders.<sup>8</sup> Hirsch et al. reported in their study that the predominance of the female with TMJ disorders during pubertal development, but the diagnosis remains unknown.<sup>9</sup>

**CONCLUSION:**

The present study concluded that temporomandibular disorders were more common in males and the most prevalent disorder among population was Myofacial Pain.

**REFERENCES:**

1. Motta LJ, Guedes CC, De Santis TO, Fernandes KP, Mesquita-Ferrari RA, Bussadori SK. Association between parafunctional habits and signs and symptoms of temporomandibular dysfunction among adolescents. *Oral Health Prev Dent* 2013;11:3-7.
2. Bonjardim LR, Lopes-Filho RJ, Amado G, Albuquerque RL Jr., Goncalves SR. Association between symptoms of temporomandibular disorders and gender, morphological occlusion, and psychological factors in a group of university students. *Indian J Dent Res* 2009;20:190-4.
3. Pereira LJ, Pereira-Cenci T, Del Bel Cury AA, Pereira SM, Pereira AC, Ambosano GM, *et al.* Risk indicators of temporomandibular disorder incidences in early adolescence. *Pediatr Dent* 2010;32:324-8.
4. Muhtaroullari M, Demirel F, Saygili G. Temporomandibular disorders in Turkish children with mixed and primary dentition: Prevalence of signs and symptoms. *Turk J Pediatr* 2004;46:159-63.
5. Carlson DS. Growth of the temporomandibular joint. In: Zarb GA, Carlsson GE, Sessle BJ, Mohl ND, editors. *Temporomandibular Joint and Masticatory Muscle Disorders*. 2<sup>nd</sup> ed. Copenhagen: Munksgaard; 1994. p. 128-50.
6. ICDR National institute of dental and craniofacial research. Improving the Nation's Oral Health, 2011. Available from: <http://www.nidcr.nih.gov/datastatistics/finddatabytopic/facialpain/prevalencetmj.htm>. [Last accessed on 2012 June 20].
7. Casanova-Rosado JF, Medina-Solís CE, Vallejos-Sánchez AA, Casanova-Rosado AJ, Hernández-Prado B, Ávila-Burgos L. Prevalence and associated factors for temporomandibular disorders in a group of Mexican adolescents and youth adults. *Clin Oral Invest* 2006;10:42-9.
8. J.-Y. Lee, Y.-K. Kim, S.-G. Kim, and P.-Y. Yun, "Evaluation of Korean teenagers with temporomandibular joint disorders," *Journal of the Korean Association of Oral and Maxillofacial Surgeons*, vol. 39, no. 5, pp. 231–237, 2013.
9. C. Hirsch, J. Hoffmann, and J. C. Türp, "Are temporomandibular disorder symptoms and diagnoses associated with pubertal development in adolescents? An epidemiological study," *Journal of Orofacial Orthopedics/Fortschritte der Kieferorthopädie*, vol. 73, no. 1, pp. 6–18, 2012.