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## Original Research

### Assessment of Gender Difference in Prevalence of Symptoms of Temporomandibular Joint Disorders: An observational study

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#### ABSTRACT:

**Background:** Temporomandibular Disorders (TMDs) involve alterations of the temporomandibular joint (TMJ), masticatory muscles, and related structures. Hence; the present study was undertaken for assessing the gender difference in prevalence of symptoms of temporomandibular joint disorders. **Materials & methods:** A total of 50 male and 50 female subjects with presence of TMJ disorders were enrolled. Complete demographic and clinical details of all the subjects were obtained. Patients were initially questioned using a questionnaire based on the Research Diagnostic Criteria for TMD. Thorough clinical examination was done in all the patients. TMJ sounds were evaluated with a stereoscope and recorded as no sound, clicks, or crepitation. All the examination procedures were carried out by same examiner. All the results were recorded and analyzed by SPSS software. **Results:** Pain during mouth opening was present in 33 males and 37 females. Pain during mastication was seen in 39 males and 45 females. TMJ pain at rest was seen in 27 males and 35 females. Headache was seen in 21 males and 18 females. Earache was seen in 15 males and 19 females. Significantly higher symptoms were seen in females. **Conclusion:** From the above results, the authors conclude that females had TMD symptoms more frequently than males. Also, the most common problem in both genders was pain.

**Key words:** Temporomandibular Joint Disorders, Symptoms

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#### INTRODUCTION

Temporomandibular Disorders (TMDs) involve alterations of the temporomandibular joint (TMJ), masticatory muscles, and related structures. Many of the clinical and instrumental aspects of these disorders overlap with other medical disciplines like otology, neurology, psychiatry, and others. Common symptoms of TMJ (temporo-mandibular joint) disorders are sounds/noises, pain, headaches, limited movement, masticatory difficulty and others.<sup>1-3</sup>

TMD comprise a constellation of signs and symptoms including masticatory dysfunction, disc displacements and inflammatory reactions, and may need a multidisciplinary approach. Approximately 5%–12% of the population has TMD symptoms, and about half to two-thirds of these will seek treatment. Pain in the temporomandibular joint (TMJ) and the masticatory

muscles (MM) provide the main complaints of patients with TMD referred for treatment. Patients with longstanding TMD complaints are challenging and have often been through several general and specialized dentists and physicians seeking for help. Magnetic resonance imaging (MRI) is not the first diagnostic approach for TMJ pain.<sup>4-6</sup> Hence; the present study was undertaken for assessing the gender difference in prevalence of symptoms of temporomandibular joint disorders.

#### MATERIALS & METHODS

The present study was undertaken for assessing the gender difference in prevalence of symptoms of temporomandibular joint disorders. A total of 50 male and 50 female subjects with presence of TMJ disorders were enrolled. Complete demographic and

clinical details of all the subjects were obtained. Patients with fibromyalgia, trigeminal neuralgia, burning mouth syndrome, atypical facial pain, migraine, atypical odontalgia, and cervical and neuropathic pain were excluded from the study. Patients were initially questioned using a questionnaire based on the Research Diagnostic Criteria for TMD. Thorough clinical examination was done in all the patients. Tense areas and localized pain were identified. Mouth opening was measured between the central incisors using a ruler. TMJ sounds were evaluated with a stereoscope and recorded as no sound, clicks, or crepitation. All the examination procedures were carried out by same examiner. All

the results were recorded and analyzed by SPSS software.

## RESULTS

In the present study, a total of 50 male subjects and 50 female subjects with presence of TMJ disorders were enrolled. Mean age of the male and female subjects was 34.5 years and 36.9 years respectively. Pain during mouth opening was present in 33 males and 37 females. Pain during mastication was seen in 39 males and 45 females. TMJ pain at rest was seen in 27 males and 35 females. Headache was seen in 21 males and 18 females. Earache was seen in 15 males and 19 females. Significantly higher symptoms were seen in females.

**Table 1: Comparison of TMD symptoms**

Symptom	Males (n=50)	Females (n=50)	p- value
Pain during mouth opening	33	37	0.41
Pain during mastication	39	45	0.00 (Significant)
TMJ pain at rest	27	35	0.00 (Significant)
Headache	21	18	0.39
Earache	15	19	0.68

## DISCUSSION

Hence; the present study was undertaken for assessing the gender difference in prevalence of symptoms of temporo-mandibular joint disorders.

In the present study, a total of 50 male subjects and 50 female subjects with presence of TMJ disorders were enrolled. Mean age of the male and female subjects was 34.5 years and 36.9 years respectively. Pain during mouth opening was present in 33 males and 37 females. C Alpaslan et al evaluated the long-term outcome of arthrocentesis for the treatment of temporomandibular joint (TMJ) internal derangements, and to document the impact of patient, time and symptom-related factors on the outcome of the procedure. The duration of symptoms before arthrocentesis has not been found to affect the outcome. Also, there were no significant differences between the results of follow-up when comparing the shorter follow-up time results (<20 months) and longer term results.<sup>10</sup>

In the present study, pain during mastication was seen in 39 males and 45 females. TMJ pain at rest was seen in 27 males and 35 females. Headache was seen in 21 males and 18 females. Earache was seen in 15 males and 19 females. Significantly higher symptoms were seen in females. Elisabeth Schilbred Eriksen et al assessed a clinically suitable staging system for evaluation of MRI of the temporomandibular joint (TMJ) and correlate the findings with age and some clinical symptoms of the TMJ. The patients with clinical TMD complaints had statistically significantly more anterior disc displacement (ADD), disc deformation, caput flattening, surface destructions, osteophytes, and caput edema diagnosed by MRI compared to the controls. Among the arthritis patients, ADD, effusion, caput flattening, surface destructions,

osteophytes, and caput edema were significantly more prevalent compared to the healthy volunteers. In the control group, disc deformation and presence of osteophytes significantly increased with age, and a borderline significance was found for ADD and surface destructions on the condylar head. No statistically significant associations were found between investigated clinical and MRI parameters. Their study presented a clinically suitable staging system for comparable MRI findings in the TMJs.<sup>11</sup> Bagis B et al evaluated the prevalence of the signs and symptoms of temporomandibular joint disorder (TMD) among patients with TMD symptoms. With a frequency of 92%, pain in the temporal muscle was the most common symptom, followed by pain during mouth opening (89%) in both genders. TMJ pain at rest, pain in the masseter muscle, clicking, grinding, and anti-depressant use were significantly more frequent in females than males. Age (p=0.006; odds ratio 0.954; 95% CI 0.922-0.987) and missing teeth (p=0.003; odds ratio 3.753; 95% CI 1.589-8.863) had significant effects on the prevalence of TMD.<sup>12</sup>

## CONCLUSION

From the above results, the authors conclude that females had TMD symptoms more frequently than males. Also, the most common problem in both genders was pain.

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