Prevalence of Symptoms of Temporomandibular Disorders among Dental Patients - A KAP Survey among Dental Practitioners
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INTRODUCTION
Temporomandibular disorders (TMD) are a group of conditions affecting the temporomandibular joint, the muscles of mastication and its associated structures. Temporomandibular disorders are multifactorial in nature with associated dental, psychological and medical conditions. The most commonly associated factors are emotional tension, postural deviation, masticatory muscular dysfunction, occlusal interferences, teeth loss, internal and external changes in TMJ. To determine the Prevalence of symptoms of Temporomandibular Disorders among Dental Patients - A KAP survey among dental practitioners. A questionnaire with eight questions regarding the prevalence of symptoms of temporomandibular disorders among dental patients in their dental practice was prepared and sent to dental practitioners. The data was analysed statistically for significance and correlations. Statistical analysis was performed using the SPSS software. The dental practitioners reported among their patients 12 % had pain very often during jaw opening, 37 % had headaches frequently, 15 % accounting for habit of clenching, 19% with difficulty in mouth opening and 9 % pain during mastication. The dental practitioners who participated in the survey found that most of the dental patients had one or more symptoms of TMD. Among these symptoms, the most commonly occurring are the headaches followed by pain on jaw opening and difficulty in mouth opening. On assessing the results of the survey, the dental practitioners had observed that most of the patients with dental issues were unaware of having TMJ disorders and adverse effects they could experience in future if left untreated.

ARTICLE HISTORY
Received February 15 2020
Accepted March 11, 2020
Published October 13, 2020

KEYWORDS
Prevalence, temporomandibular joint disorders, temporomandibular joint, headaches, pain.
means the group of conditions affecting the temporomandibular joint, the masticatory musculature or both. The signs and symptoms include pain in the masticatory musculature and/or joint which can radiate and refer, locking of the jaw, noises like clicking and crepitus during joint movement, headache, tightness around the face in the morning and referred pain to the ear, [5] Also traumatic occlusion, wear of dentition due to parafunctional habits like bruxism, anxiety and stress have been experienced by the patients with TMD, [7] Epidemiological studies have estimated around 50-75% of the population exhibit few signs of TMD. Many a times these symptoms would be subclinical and the patient might not be trying to relate this to the underlying jaw problem, [6] In 15-20% these signs turn into symptoms for which the patients will seek treatment. [7] So the identification of the signs of a possible TMD is essential to diagnose TMD. The purpose of the survey was to determine the prevalence of symptoms of TMD among dental patients in their dental practice by various dental practitioners.

MATERIALS AND METHODS
A questionnaire consisting of 8 questions were prepared to assess the prevalence of symptoms of temporomandibular disorders among the dental patients. This questionnaire was sent to 100 dental practitioners regardless of their age, sex and experience. The questionnaire were sent through google forms. (Figure 1) Clear instructions were given in the questionnaire form about the aim of this survey and answering the questions. The survey was non blinded. Name, mail id and designation of the dental practitioners were kept confidential.

Figure 1: Questionnaire for Prevalence of symptoms of Temporomandibular Disorders among Dental Patients in their dental practice - A KAP survey among dental practitioners
Results
A total of 88 dental practitioners participated in this study. Among which 50% were postgraduates of various specialties, 23% being practitioners, 18% interns and remaining 9% were undergraduate students as shown in figure 2.

![DESIGNATION](image)

**Figure 2: Designation of the dental practitioners who participated in this survey**

On assessing the frequency of pain during jaw opening the dental practitioners reported that 72% of patients had pain at few instances during jaw opening, 16% complained of pain frequently during jaw opening, while the remaining 12% had pain very often during jaw opening as shown in figure 3.

![FREQUENCY OF PAIN DURING JAW OPENING](image)

**Figure 3: Distribution of frequency of pain during jaw opening**

On evaluating the prevalence of headache associated with TMD the dental practitioners found that 46% of patients had headache less frequently and with 37% patients having very frequent headaches and 17% did not have any symptom of headache as shown in figure 4.

![IS FREQUENT HEADACHE COMMONLY SEEN IN TMD](image)

**Figure 4: Distribution of headaches in patients with temporomandibular joint disorders**

With regard to habit of clenching of teeth, the dental practitioners reported that 58% of patients had been clenching their teeth often while 15% of patients frequently clenched their teeth with remaining 27% patients had this habit of clenching less frequently as shown in figure 5.
The dental practitioners reported that patients with TMD reported with difficulty in mouth opening. 42% of patients experienced pain and discomfort occasionally during mouth opening while 19% experienced extreme difficulty during mouth opening and the remaining 39% had no difficulty and discomfort opening their mouth as shown in figure 6.

The dental practitioners also observed that patients also experienced pain during mastication. They reported that 53% of patients had complained of pain occasionally during mastication, 38% patients experienced pain during mastication often and the remaining 9% experienced pain very often during mastication as shown in figure 7.

**DISCUSSION**

TMJ depends on its harmonious relationship with its associated structures such as the mandibular condyles, meniscus, glenoid fossa, ligaments and muscles of mastication.[7,8] The TMJ functions normally until it is disturbed by external factors such as mechanical, psychological, occupational and habits.[9] Our human body has the ability to repair these aggressions periodically within physiological limits, but if the aggression rate increases than the repair rates, signs and symptoms of TMD begin to appear.[10] The etiology of TMDs has been associated to several factors such as immune mediated systemic disease, neoplasm, malocclusion, and loss of teeth, extrinsic and intrinsic changes of TMJ structure. [11] Prosthodontic rehabilitation, orthodontic
Knowledge and Prevalence of TMD

With any degree of clenching had a higher rate of TMD than those who showed no degree of clenching. The dental practitioners observed that patients with TMD also reported with difficulty in mouth opening. 42% of patients experienced pain and discomfort occasionally during mouth opening while 19% experienced extreme difficulty during mouth opening and the remaining 39% had no difficulty and discomfort opening their mouth. The dental practitioners also found out that patients also experienced pain during mastication. 53% of patients had pain occasionally during mastication and the remaining 9% experienced pain very often during mastication. These findings are of clinical importance because it will be very helpful in early diagnosis and management of these TMDs. Trauma of the neck or head was also significantly related to joint locking and joint sounds.

CONCLUSION

The dental practitioners who participated in the survey found that most of the dental patients had one or more symptoms of TMD. Among these symptoms, the most commonly occurring are the headaches followed by pain on jaw opening and difficulty in mouth opening. On assessing the results of the survey, the dental practitioners had observed that most of the patients with dental issues were unaware of having TMJ disorders and adverse effects they could experience in future if left untreated. Further CME and CDE programmes have to be conducted for creating an awareness and educating the patients about the ill effects of TMD.

Conflict of Interest

The authors declare there is no conflict of interest.

Source of Funding

Self.

REFERENCES


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