



# TMD Among Adolescents

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## Abstract

The present study is to review TMD among adolescents. This review discusses several symptoms of Temporomandibular disorders, and the relation between psychological conditions and TMD among adolescents and young adults. The review points to the increase of TMD symptoms between young adults and the need for early evaluation, however more research is needed.

**Keywords:** Temporomandibular disorders; Adolescents; Pain

## Introduction

Temporomandibular disorders (TMD) are a group of disorders that can affect temporomandibular joints (TMJ), masticatory muscles, or both [1]. Symptoms can include pain in the temporomandibular joint, periarticular area, or mastication muscles; clicking; and deviations or restrictions in normal range of movements [2]. Headaches can be a symptom of temporomandibular disorders. A study found a significant relationship between headache and the tones of mastication muscle during maximum clenching [3].

The prevalence of TMD is low between children and increases between adolescents and young adults [4]. Another study revealed that symptoms of temporomandibular disorder (TMD) can start from 6 years of age and increase during adolescence [5]. The most common signs and symptoms are masticatory muscles sensitivity, TMJ pain, restricted mandibular movement, dizziness, and tinnitus [6].

## Discussion

More studies investigated TMD between adults, however recent studies show an increase in its prevalence among the adolescents, with rates ranging from 7.3% and 30.4% [7]. TMD symptoms were

present in 34.9% of adolescents, and myofascial pain being the most prevalent type 10.3% [8]. The prevalence of TMD-related symptoms in prospective orthodontic patients was high, emphasizing the importance of TMD examination before starting orthodontic treatment [9].

A cross-sectional study was conducted with 1342 adolescents aged 10-17 years. The prevalence of TMD was considered high (33.2%) and adolescents with chronic pain and headache in the past six months were more likely to have TMD [10]. The estimated prevalence of chronic headaches is 10.0% between the pediatric population. This can lead to school absence, and poor school performance [11, 12]. The parents rated that their children with TMD pain have from emotional, somatic, and aggressive behavior comparing to healthy control subjects. Parents believed that TMD-pain influenced their children's physical activities but not social activities [13]. This will increase the need for early evaluation and clinicians should be prepared to diagnose early signs of TMD.

Temporomandibular disorders (TMD) can be related to psychological factors. A study investigated the association between psychological factors and TMD in adolescents between

12 and 15 years, found that pain related TMDs are associated with psychological factors in the adolescent population of rural Columbia. Symptoms of anxiety, depression and somatization were found to be associated to TMD, unrelated to the frequency [14]. Psychological characteristics can be either a cause or consequences of temporomandibular disorders [11, 14].

## Conclusion

There are several approaches to treat temporomandibular disorder, however patient education is important in to manage that. Patients with TMD exhibited oral behaviors, for example “putting pressure on the jaw”; “chewing food on one side”; “pressing, touching, or holding teeth together at times other than eating”; “eating between meals”; and “yawning.” Patient education and physical therapy applied together changes the oral behaviors of patients with TMD, but this effect disappeared 9 months after intervention [15, 16]. Young adults can have daily stress, such as that resulting from examinations, own expectations, family expectations, lack of sleep, and limited free time, hormonal changes, and mental maturation [5]. This can affect their TMD symptoms, Psycho emotional status should be evaluated in young adults with painful TMD disorders [17].

Based on this review, it can be concluded that young adults with TMD can have an emotional profile that can affect their daily life. It is recommended that these data are taken as reference for future research on TMD management among young adults.

## Acknowledgement

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## Conflict of Interest

Author declares no conflict of interest.

## References

1. Impellizzeri A, Di Benedetto S, De Stefano A, Monaco Guercio E, Barbato E, et al. (2019) General health & psychological distress in children with temporomandibular disorder. *Clin Ter* 170(5): e321-e327.
2. Wozniak E, Loster JE, Wiczorek A (2018) Relation between Headache and Mastication Muscle Tone in Adolescents. *Pain Res Manag* 2018: 7381973.
3. Lili Xu, Bin Cai, Shenji Lu, Shuai Fan, Kerong Dai (2021) The Impact of Education and Physical Therapy on Oral Behaviour in Patients with Temporomandibular Disorder: A Preliminary Study. *Biomed Res Int* 2021: 6666680.
4. Slade GD, Diatchenko L, Bhalang K, A Sigurdsson, R B Fillingim et al. (2007) Influence of psychological factors on risk of temporomandibular disorders. *J Dent Res* 86(11): 1120-1125.
5. Motta LJ, Guedes CC, De Santis TO, Kristianne Porta Fernandes, Raquel Agnelli Mesquita-Ferrari, et al. (2013) Association between parafunctional habits and signs and symptoms of temporomandibular dysfunction among adolescents. *Oral Health Prev Dent* 11: 3-7.
6. Marpaung C, Lobbezoo F, van Selms MKA (2018) Temporomandibular Disorders among Dutch Adolescents: Prevalence and Biological, Psychological, and Social Risk Indicators. *Pain Res Manag* 2018: 5053709.
7. Sobral APT, Godoy CLH, Fernandes KPS, Bussadori SK, Ferrari RAM, et al. (2018) Photomodulation in the treatment of chronic pain in patients with temporomandibular disorder: protocol for cost-effectiveness analysis. *BMJ Open*. 8(5): e018326.
8. De Luca GC, Bartleson JD (2010) When and how to investigate the patient with headache. *Semin Neurol* 30: 131-144.
9. Augusto VG, Perina KCB, Penha DSG, Dos Santos DCA, Oliveira VAS (2016) Temporomandibular dysfunction, stress and common mental disorder in University students. *Acta Ortop Bras* 24(6): 330-333.
10. Yap AU, Chen C, Wong HC, Yow M, Tan E (2021) Temporomandibular disorders in prospective orthodontic patients. *Angle Orthod* 91(3): 377-383.
11. Al Khotani A, Gjerset M, Naimi Akbar A, Hedenberg Magnusson B, Ernberg M, et al. (2018) Using the child behavior checklist to determine associations between psychosocial aspects and TMD-related pain in children and adolescents. *J Headache Pain* 19(1): 88.
12. Restrepo C, Ortiz AM, Henao AC, Manrique R (2021) Association between psychological factors and temporomandibular disorders in adolescents of rural and urban zones. *BMC Oral Health* 21(1): 140.
13. Maślak Bereś M, Loster JE, Wiczorek A, Loster BW (2019) Evaluation of the psychoemotional status of young adults with symptoms of temporomandibular disorders. *Brain Behav* 9(11): e01443.
14. Braido GVDV, Campi LB, Jordani PC, Fernandes G, Gonçaves DAG (2020) Temporomandibular disorder, body pain and systemic diseases: assessing their associations in adolescents. *J Appl Oral Sci* 28: e20190608.
15. Bertoli FMP, Bruzamin CD, Pizzatto E, Losso EM, Brancher JA, et al. (2018) Prevalence of diagnosed temporomandibular disorders: A cross-sectional study in Brazilian adolescents. *PLoS One* 13(2): e0192254.
16. Sojka A, Żarowski M, Steinborn B, Hedzelek W, Wiśniewska Spychała B, et al. (2018) Temporomandibular disorders in adolescents with headache. *Adv Clin Exp Med* 27(2): 193-199.
17. Romani V, Di Giorgio R, Castellano M, Barbato E, Galluccio G (2018) Prevalence of craniomandibular disorders in orthodontic pediatric population and possible interactions with anxiety and stress. *Eur J Paediatr Dent* 19(4): 317-323.