

## INTRODUCTION

- Temporomandibular joint disorders (TMJDs) are often studied in adults but have been noted in the pediatric population (children and adolescents < 18 years of age) as well.
- Presence of TMJDs impacts quality of life.
- Treatment of TMJDs in pediatric patients remains unclear as prevalence of the issue is not often assessed.
- Target population: pediatric patients with TMJDs

## PURPOSE

- Identify the prevalence of TMJDs in the pediatric population to assist with recognition of the presence of TMDs in patients and further treatment planning.

## METHOD: LITERATURE SEARCH

### Search Engines

PubMed  
Weill Cornell  
Medicine Library

### Key Words

“temporomandibular joint disorders” AND “children” AND “systematic review”

### Search Outcome

47 total articles, out of which 3 were chosen as relevant

Filters include: (1) peer-reviewed journals (2) full text available (3) year published 2013-2023

## RESULTS

- Valesan et al. 2021: overall prevalence of TMJDs in children/adolescents is 11%; the most prevalent TMJD was disc displacement with reduction (DDwR).
- Christidis et al. 2019: included studies demonstrated prevalence of TMJDs varies between 7.3 & 30.4% in children ages 10-19 years.
  - Some studies included results based on self-reported TMD pain as opposed to use of DC/TMD.
- Minervini et al. 2023: 26% of TMD in children and adolescents is brought on by trauma. In children, spontaneous orofacial pain or pain on palpation has a frequency ranging from 2.59 to 35%
  - The DC/TMD was adjusted for the pediatric population.

## CONCLUSIONS

- There is a large amount of variability between the reported prevalence of TMJDs in the pediatric population; as a result, no definitive conclusion can be made.
- More research is required on this topic to determine:
  - (1) How to best assess the presence of a TMJD in the pediatric population, and thus:
  - (2) What the true prevalence of TMJDs in children and adolescents is.

## ASSESSMENT OF CURRENT PRACTICE

- Previous identification of TMJDs was based on use of research diagnostic criteria (RDC/TMD), whereas the new diagnostic criteria (DC/TMD) is an evidence-based assessment protocol.
- Gap: New studies have emerged analyzing prevalence using both protocols, but the DC/TMD is only valid for users > 18 years old, so applying it to the pediatric population requires certain adaptations.
- Importance: Treatment of TMJDs in pediatric patients remains unclear as prevalence of the issue is not often assessed.

## PROPOSED CHANGES

- Children can have limited communication abilities & vary in their feelings & perceptions, so the DC/TMD cannot reliably and consistently be applied to this patient population.
- The development of an assessment tool geared towards the pediatric population would help generate an accurate figure in prevalence of TMJDs.
- If self-reported TMD pain is to be used as a parameter for assessment, more research is needed to determine how to best get patients of this population to verbalize their symptoms, feelings, and sensations.

## REFERENCES

- Valesan, L., Da-Cas, C., Réus, J., Denardin, A., Garanhani, R., Bonotto, D., . . . De Souza, B. (2021). Prevalence of temporomandibular joint disorders: A systematic review and meta-analysis. *Clinical Oral Investigations*, 25(2), 441-453.
- Christidis, N., Lindström Ndanshau, E., Sandberg, A., & Tsilingaridis, G. (2019). Prevalence and treatment strategies regarding temporomandibular disorders in children and adolescents-A systematic review. *Journal of oral rehabilitation*, 46(3), 291-301. <https://doi.org/10.1111/joor.12759>
- Minervini, G., Marrapodi, M., Fiorillo, L., Franco, R., Ciccù, M., & Cervino, G. (2023). Temporomandibular disorders and orofacial neuropathic pain in children and adolescents: A systematic review. *The Journal of Clinical Pediatric Dentistry*, 47(3), 26-38.