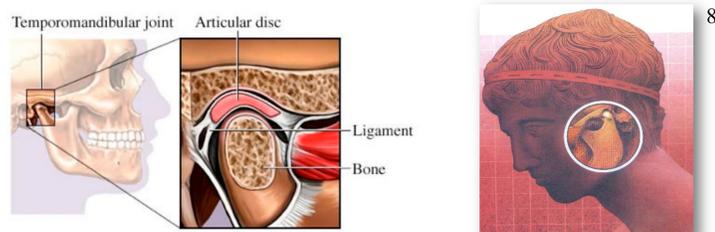




Introduction

- Painful Temporomandibular disorders (TMDs) are characterized by pain in the muscles of mastication, the temporomandibular joint (TMJ), or both.¹
- 2% to 25% of adolescents from USA, Sweden and Brazil present with painful TMD.^{2,3}
- This condition affects their quality of life, increases stress and analgesic consumption and accounts for absence from school.⁴
- Comorbidities are known to contribute to the onset and persistence of TMD-related pain in adults but no such research has addressed this issue in the Canadian adolescent population.

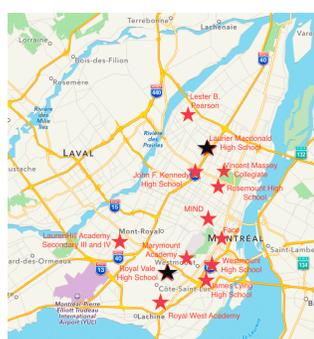
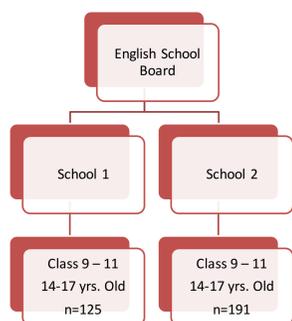


Aim

- To assess the association between comorbidities and TMD-related pain among adolescents (14-17 years old) in Montreal.

Methods

- Conducted a cross-sectional survey comprising of 2 schools in Montreal among student adolescents (14-17 years old) to measure the prevalence of painful TMD, as well as to identify the most common TMD comorbidities.
- Two validated questionnaires were used as a screening tool to detect signs and symptoms of TMD-related pain.



Methods

- The questionnaires used to screen for TMD-related pain had good reliability and excellent validity.^{5,6}
- Pain frequency across a certain period and modification of pain by function were factors used to assess TMD-related pain in both questionnaires.

1) Do you have pain in the temple, face, jaw joint, or jaw once a week or more often?
Yes () No ()

Please indicate where you feel pain with an "X".

2) Do you have pain when you open your mouth wide or chew, once a week or more often?
Yes () No ()

3) In the last 30 days, on average, how long did any pain in your jaw or temple area on either side last?
No pain ()
From very brief to more than a week, but it does stop ()
Continuous ()

4) In the last 30 days, have you had pain or stiffness in your jaw on waking?
Yes () No ()

5) In the last 30 days, did the following activities change any pain (that is, made it better, or made it worse) in your jaw or temple area on either side?

a. Chewing hard or tough food
Yes () No ()

b. Opening your mouth or moving your jaw forward or to the side
Yes () No ()

c. Jaw habits such as holding teeth together, clenching, grinding or chewing gum
Yes () No ()

d. Other jaw activities such as talking, kissing or yawning
Yes () No ()

Figure 1: Kappa = 0.83; Sensitivity = 0.98 and specificity = 0.90⁵

Figures 2: Kappa 0.53 – 0.78⁶

Results

- Total participants: 316; 48% Males 52% Females

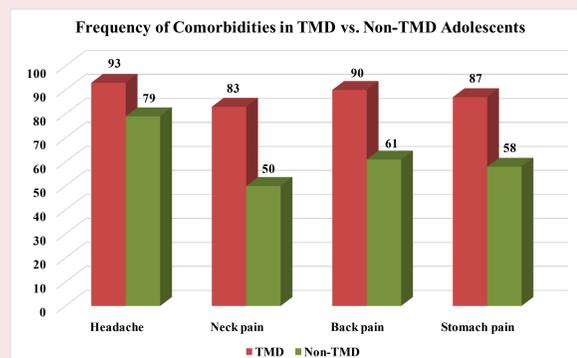


Figure 3: Frequency of comorbidities in TMD vs. non-TMD cases.

Results

- In this study we found a 9.5% prevalence rate of TMD-related pain among the study population.
- 2/3 of the TMD-related pain cases were females.

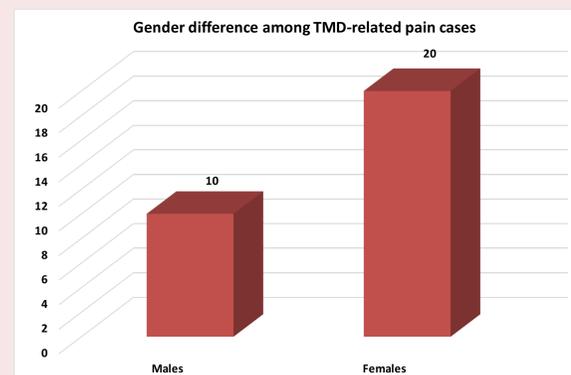


Figure 4: Gender differences among TMD-related pain cases.

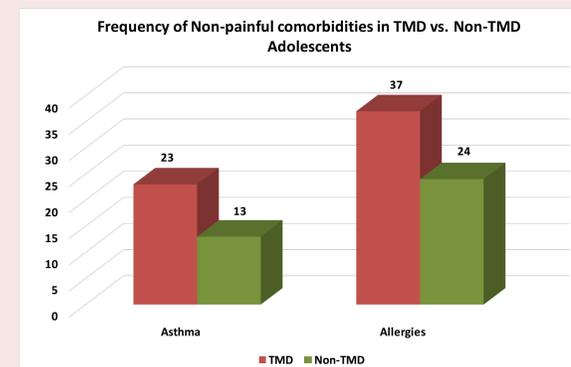


Figure 5: Frequency of non-painful comorbidities among study pop.

- Non-painful comorbidities were 2 times more likely to occur in TMD-related pain cases when adjusted for age and gender.
- Our results show an association between headaches, neck pain, and back pain with TMD-related pain among adolescents.

Comorbidities	Odds Ratio (95% CI)	
	*Crude	**Adjusted
Headaches	3.73 (0.87-16.12)	3.49 (0.80-15.20)
Neck Pain	5.04 (1.88-13.53)	6.69 (2.25-19.83)
Back Pain	5.72 (1.70-19.32)	5.40 (1.60-18.34)
Stomach Pain	4.73 (1.61-13.90)	6.06 (1.77-20.79)
Asthma	1.99 (0.80-4.95)	2.09 (0.83-5.27)
Allergies	1.82 (0.83-4.02)	2.17 (0.96-4.88)

Figure 6: Comorbidities in bold had significant P values < 0.05

Conclusion

- The prevalence of TMD-related pain in adolescents is estimated between 2% - 25%. Our findings are a 9.5% prevalence rate.
- Many studies show that TMD-related pain affects females more so than males.⁷ Our findings agree with this consensus.
- Painful comorbidities such as headaches, neck pain and back pain are associated with TMD-related pain.

Future direction

- Educate dentists and physicians to use a screening tool when treating adolescents.
- Promote the use of a multidisciplinary approach when treating TMD-related pain.

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Acknowledgements

