

SCIENTIFIC SECTION

Commentaries on scientific papers published in this edition

Evaluation of a quality of life measure for children with malocclusion

C. O'Brien, P. E. Benson and Z. Marshman

This cross-sectional study compared the oral health related quality of life of two groups of children, one with a malocclusion and one without, using a previously validated measure, the child perception questionnaire. Malocclusion as predicted had a negative impact on oral health related quality of life. The great strengths of this paper lie in its careful execution and consideration of a range of variables pertinent to the impact of malocclusion on quality of life, and in its choice of the child perception questionnaire which has been used widely both in Canada and the United Kingdom and was subject to careful psychometric assessment. Two possible applications of measures of oral health related quality of life have been proposed in the literature: the assessment of need and the appraisal of treatment outcome. As with much research in oral health related quality of life a cross-sectional design has been used here to explore differences between groups with and without a condition (in this case malocclusion). While this provides some evidence of possible effect sizes in treatment studies, it does not accurately reflect the design of most clinical studies which will adopt a within groups design comparing oral health related quality of life before and after treatment. The inclusion of oral health related quality of life into the assessment of treatment need is complex, though Gherunpong *et al.* provide a comprehensive model for how this might be achieved.¹ The data provided here would be useful in applying this technique. Overall this paper provides an invaluable contribution to our knowledge of the impact of malocclusion on quality of life and provides a foundation for future research in both the assessment of treatment need and treatment outcome.

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Reference

1. Gherunpong S, Tsakos G, Sheiham A. A socio-dental approach to assessing children's orthodontic needs. *Eur J Orthod* 2006; **28**(4): 393–99.

Longitudinal study on TMJ disk status and its effect on mandibular growth

**C. Flores-Mir, L. Akbarihamed, B. Nebbe,
G. Heo and P. W. Major**

The authors used a retrospective cohort study to investigate the effect of temporomandibular joint (TMJ) disk status on mandibular growth among adolescents. Although the number of participants was limited, the power of the study was probably adequate to detect any large and clinically significant difference in mandibular growth, by disk status. The investigators controlled potential bias with blinding. Loss to follow-up was high and it would have been helpful if the authors had provided their opinions why this would not impact the validity of the study. Because no interaction was detected between disk status and orthodontic treatment, participants with and without orthodontic treatment could be combined to investigate the effect of TMJ disk status on mandibular growth, with adjustment for potentially confounding variables. Orthodontic treatment was included in the final statistical model, thereby mitigating its potential confounding effect. The investigators also adjusted for age, gender and time between X-rays. However, the authors had no data on race, socioeconomic status, and did not include a variable for initial growth potential due to skeletal malocclusion status, and thus were unable to adjust for the potential confounding influence of these variables.

Clinical research on the effect of TMJ disorders on mandibular growth is very difficult and I commend the authors for accepting this challenge. In spite of its limitations, the evidence provided by this study has value and indicates that TMJ disk status, as defined in this study, is probably not associated with large alterations in mandibular growth. As the authors suggest, it might still be possible for painful or progressively locking TMJs to influence mandibular growth. From a clinical standpoint, this study would indicate that routine pre-treatment MRIs for orthodontic patients, in order to document TMJ status, are probably not a justifiable expense. However, I would encourage continued vigilance in diagnosing and addressing temporomandibular disorders, especially painful and dysfunctional disorders, in orthodontic patients.

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