Comparison of the Modified Nelson Thumb Score to the DASH for Patient Outcome Assessment of Basal Joint Arthritis

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Introduction
Patient reported outcome questionnaires are an important tool for evaluating and comparing different surgical techniques. The Disability of the Arm, Shoulder and Hand (DASH) outcome measure is a common questionnaire for upper extremity pathology, however, it is a generalized outcome measure, has 25 questions and not specific to thumb pain. The Nelson score is a 10 question assessment recently developed as a more specific outcome measure of basal joint arthritis\(^1\)-\(^2\). The modified Nelson score is reversed so 0 is considered asymptomatic and 100 is most severe to correlate with the DASH score.

Objective
Evaluate the effectiveness of the modified Nelson score compared to the DASH score for patient outcome assessment after basal joint arthritis treatment.

Methods
The DASH and modified Nelson score were given to all patients undergoing arthroscopic CMC arthritis surgery including arthroscopic trapeziectomy and arthroscopic hemitrapeziectomy. These questionnaires were given at initial pre-operative visit and then repeated at 3 month follow up. The response was evaluated by calculating the effect size (ES) and standardized response mean (SRM).

Results
Both scores demonstrated a significant improvement from pre-operative to 3 month postoperative evaluation (p<.005). The effect size (ES) for the DASH and modified Nelson scores were 1.57 and 2.06 respectively. The standardized response mean (SRM) for the DASH and modified Nelson scores were 1.09 and 1.58 respectively. The modified Nelson score demonstrated a larger increase in both the ES and SRM compared to the DASH score.

Conclusion
The shorter and much easier to deliver modified Nelson thumb score is more responsive than the DASH score for assessing outcomes following basal joint arthritis surgery. The modified Nelson patient outcome assessment tool for CMC joint surgery may increase patient completion rate as it is much easier and faster to deliver with 10 simple questions rather than 25 questions in the DASH score. The results of these questionnaires are more specific for CMC arthritis which will allow a more accurate assessment of treatment options for future research. The author is now utilizing the modified Nelson score for all CMC joint procedures to assess patient outcomes and evaluate various treatment options.

References