International Centre for Allied Health Evidence

University of South Australia

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*i*CAHE JC Critical Appraisal Summary

Journal Club Details

Journal Club location	**NARS**
JC Facilitator	**Josie Kemp**
JC Discipline	**Speech Pathology**
CAT completed by:	**Holly**

Question

NA

Clinical Scenario

As discussed with Janine Dizon, the NARS Speech Pathology Journal Club would potentially like to explore the below paper for our next journal club meeting.

Review Question/PICO/PACO

P People who experience altered/diminished/absent facial sensation post stroke

I Facial sensation retraining

C No intervention

O Improved or regained facial sensation

Article/Paper

Phillips C, Essick G, Preisser JS, Turvey TA, Tucker M, Lin D. Sensory Retraining following orthognathic surgery: effect on patient perception of altered sensation. J Oral Maxillofac Surg 2007;65:1162–73.

Please note: due to copyright regulations CAHE is unable to supply a copy of the critically appraised paper/article. If you are an employee of the South Australian government you can obtain a copy of articles from the DOHSA librarian.

Article Methodology: RCT

Click here to access critical appraisal tool

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Ques No.	Yes	Can't Tell	No	Comments
1	✓			**Did the trial address a clearly focused issue?** The primary research hypothesis was that the magnitude and duration of the perceived burden from altered sensation reported by patients following bilateral sagittal split osteotomy (BSSO) and trauma to the third division of the trigeminal nerve is lessened when facial sensory retraining exercises are performed in conjunction with standard opening exercises as compared to standard opening exercises alone
2	✓			**Was the assignment of patients to treatments randomised?** Subjects were randomized to one of the two exercise programs using a stratified block randomization. The stratification factors for randomization were center, the surgical procedure (mandibular only vs. two-jaw osteotomies) and the addition of a genioplasty (yes vs. no). These stratification factors were selected based on previous studies indicating that the rate of sensory recovery is affected by the type of surgery performed and the number of procedures performed in the same area. Twelve subjects were incorrectly randomized. In the original protocol, the classification of the surgery procedure was determined from the surgical treatment plan. When it was noted that the actual surgery performed did not always agree with the surgical treatment plan, the protocol was amended so the classification was determined from operative notes detailing the actual surgery performed. For all analyses, however, subjects were categorized according to the surgical procedure used for randomization purposes (intention-to-treat).
3	✓			**Were all of the patients who entered the trial properly accounted for at its conclusion?** 186 subjects gave consent for the Sensory Retraining Clinical Trial, were randomized to exercise programs (sensory retraining exercises in conjunction with standard opening exercises or standard opening exercises only) and completed the first exercise training session. Before each exercise session, the trainer consulted with the attending surgeon regarding any instructions for removal of elastics and contra-indications to the exercises. As a result, the exercise program was not implemented according to protocol for eleven subjects (6%): Ten were not permitted to start the exercise program at 1 week postsurgery for clinical reasons, and one had the exercise program delayed or interrupted. Six of these subjects had been assigned to the sensory-retraining and five to the opening-only exercise groups. There were no serious adverse events. Three subjects did not complete data collection at 3 months and three at 6 months. Missing values were assigned the score of the nearest preceding data collection visit with a recorded value (last observation carried forward). **Is it worth continuing?** **YES**

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4	✓			**Were patients, health workers and study personnel 'blind' to treatment?** The attending surgeon and the research associate responsible for data collection were masked to the exercise group assignment throughout the entire clinical trial. The statistician was masked to the subject's assignment until all subjects had completed the 6 month data collection visit.
5	✓			**Were the groups similar at the start of the trial?** The percentages for each of the stratification factors were very similar for the two exercise groups. The two groups were also similar in average age and percentage of females and Caucasians.
6	✓			**Aside from the experimental intervention, were the groups treated equally?** It appears that all subjects were treated equally aside from the experimental intervention
7				**What are the results? How large was the treatment effect?** The two exercise groups did not differ significantly at any postsurgical time in the perceived problem level from mouth or face pain. The difference between the two groups at each visit was not statistically significant for unusual sensations although the trend was for the sensory retraining group to have a higher likelihood of reporting fewer problems. By 6 months, the likelihood of a subject reporting lower problem or interference level related to numbness or less lip sensitivity was significantly higher in the sensory-retraining group, approximately twice that of the opening exercise only group. The results from this clinical trial support the premise that a simple noninvasive exercise program initiated shortly after orthognathic surgery can lessen the objectionable impression of negative altered sensations.
8				**How precise was the estimate of the treatment effect?** While P values were provided, 95% Confidence intervals were not reported in this study. Therefore estimate of precision cannot be provided.
9	Journal Club to discuss			**Can the results be applied to the local population? Choose relevant context issues. The following are only suggestions to prompt discussion.** **CONTEXT ASSESSMENT** – *Infrastructure* – *Available workforce (? Need for substitute workforce?)* – *Patient characteristics* – *Training and upskilling, accreditation, recognition* – *Ready access to information sources* – *Legislative, financial & systems support* – *Health service system, referral processes and decision-makers* – *Communication* – *Best ways of presenting information to different end-users* – *Availability of relevant equipment* – *Cultural acceptability of recommendations* – *Others*
10				**Were all important outcomes considered?**

11		**Are the benefits worth the harms and costs?**
12		**What do the study findings mean to practice (i.e. clinical practice, systems or processes)?**
13		**What are your next steps?** ***ADOPT, CONTEXTUALISE, ADAPT*** **And then (e.g. evaluate clinical practice against evidence-based recommendations; organise the next four journal club meetings around this topic to build the evidence base; organize training for staff, etc.)**
14		**What is required to implement these next steps?**

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