

**FACIAL AESTHETICS AND PSYCHOSOCIAL
OUTCOME ASSESSMENT FOLLOWING
TREATMENT OF NON-SYNDROMIC CLEFT
PATIENTS**



Doctor of Clinical Dentistry (Orthodontics)

Manuscript

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Signed Statement

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution to Peter Foo and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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Dr Peter Foo

Summary

The main aims of this study of treated South Australian adult patients with the diagnosis of non-syndromic cleft, was to evaluate the effect of long-term cleft treatment on general health-related quality of life (HRQoL) and oral health impact, to determine associations by age and gender, and to compare against the South Australian population norms. Furthermore, the study aimed to evaluate the opinions of a group of professionals and a group of lay people regarding the facial appearance of South Australian adult patients treated for orofacial clefting, as well as their perceptions whether further surgery was required to correct the facial appearance. It also set out to determine whether there are differences in opinion within professional groups as well as between lay people with and without a cleft.

Participants (n=88) were recruited from cleft patients treated at the Children, Youth and Women's Health Service under the Australian Craniofacial Unit over the last 34 years (1975 to 2009). Participants all had surgery to correct their unilateral or bilateral cleft lip, cleft palate, cleft lip and palate, and to correct jaw size discrepancies. Inclusion criteria were non-syndromic cleft patients aged 18 years or over who had completed their cleft treatment at this centre. Participants completed a questionnaire that included information pertaining to age, sex, HRQoL and oral health impact. State-based and national norms were used for comparative purposes. HRQoL was measured by the SF-36 questionnaire with high values indicating a good level of HRQoL. Oral health impact was measured by OHIP-14 questionnaire where high values indicated a poor level of oral health.

Photographic records of 80 of the above participants were obtained with their consent. The photographs were taken following the completion of all treatment including orthognathic surgery as well as revision surgery. The photographs were standardised using computer software (Adobe Photoshop Windows PC version CS8.0) for size, background and brightness. Frontal, left profile and right profile views were available for each patient. These

images were cropped, re-scaled and projected onto a screen for assessment by a panel of professional and lay people raters. Professionals (2 plastic surgeons, 1 dentist, 1 orthodontist, 1 psychologist) and lay people (1 male, 1 female adult without a cleft; 1 male, 1 female adult with a cleft) were recruited. The raters were asked to rate the photographs according to attractiveness of each patient's nose, lips and overall facial appearance. The raters were also asked whether they thought further surgery was required. Facial aesthetics was measured by Visual Analogue Scale (0-100mm) with high values indicating good aesthetics. Necessity for further treatment was measured by Visual Analogue Scale (0-100mm) where high values indicated high perceived need for further treatment.

There were no significant age or sex differences in the cleft sample's SF-36 and OHIP-14 scores. When compared against South Australian 2002 state-level norms, cleft participants scored higher on physical functioning and physical role function but lower on vitality and mental health. The prevalence of having experienced one or more of OHIP-14 items 'fairly often' or 'very often' was 2.7 times higher than national-level estimates, while extent was 2.8 times and severity 1.7 times higher.

The professionals rated facial aesthetics significantly lower and had a lower perception of need for further treatment than the lay people with and without a cleft. The lay people with a cleft rated facial aesthetics significantly higher and had a lower perceived need for further treatment than the lay people without a cleft. The non-surgical professionals rated facial aesthetics significantly lower and had a lower perceived need for further treatment than the surgical professionals.

Oral health among cleft patients included in our study was poor compared with population-level estimates. The HRQoL showed mixed results, with the vitality and mental health components being poorer in the cleft group compared with population-level estimates.

These results indicate that treatment for orofacial clefting does not entirely remove the factors contributing to poor HRQoL and oral health.

Differences exist in the facial aesthetics ratings and perceived need for further surgery between professionals, lay people with and without a cleft. This has profound implications in the assessment of the cleft deformity and management of treatment expectations.