Self-esteem in children with facial paralysis: A review of measures

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Research in surgery has traditionally focused on quantitative results, sometimes ignoring the qualitative impact on patients. The purpose of the present review was to identify appropriate measurement tools to assess the psychosocial domains of children undergoing corrective surgery for facial paralysis. More specifically, the construct of self-esteem was explored. The outcome of the present investigation is the recommendation for Harter-based assessment tools for research purposes and the Rosenberg Self-Esteem Scale for clinical use. Using these tools will allow health care professionals to assess the psychosocial issues that are important to children with facial differences and to conduct research on the psychosocial impact of corrective surgery.

Key Words: *Assessment; Facial paralysis; Self-esteem*

L'estime de soi chez les enfants atteints de paralysie faciale : examen des outils d'évaluation

RÉSUMÉ : La recherche en chirurgie met traditionnellement l'accent sur les résultats quantitatifs, allant même parfois jusqu'à négliger les conséquences qualitatives pour les patients. La présente étude a pour but de trouver des outils de mesure appropriés, permettant d'évaluer les aspects psychosociaux des enfants qui subissent une intervention chirurgicale correctrice pour de la paralysie faciale. Plus précisément, nous avons exploré le volet de l'estime de soi. Nous en sommes arrivés aux conclusions suivantes : les meilleurs outils d'évaluation sont ceux fondés sur le modèle d'Harter pour la recherche et sur l'échelle de l'estime de soi de Rosenberg en clinique. Ces outils permettront aux professionnels de la santé d'évaluer les aspects psychosociaux qui revêtent de l'importance pour les enfants présentant des différences faciales et de faire de la recherche sur l'incidence psychosociale de la chirurgie correctrice.

Self-esteem is a basic human need necessary for achievement (1), the main driving force behind all human activity and an organizing principle on which personal theories of reality are constructed (2). It operates, in effect, as an immune system of consciousness, providing resistance, strength and a capacity for regeneration (3,4). Its absence lowers self-confidence and increases the likelihood of avoidant social behaviour (5). Thus, a lack of self-esteem impairs one's ability to become a successful member of society (6,7).

Traditionally, surgical research has focused on quantifi-

able outcomes such as morbidity and mortality rates, and functional outcomes. Qualitative aspects of surgical procedures, however, have received much less attention. The question addressed in the present article is, in addition to functional improvement, does restoration of facial expression improve patients' general state of happiness, as reflected in self-esteem (8). The purpose of the present review was to identify which of the published self-esteem assessment tools is most appropriate for children with facial paralysis and the pediatric population in general.

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TABLE 1
Self-esteem assessment tools for children

Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (22)	<p>Reports self-esteem as a profile across its domains</p> <p>24 (pictorial) items, exists in two formats (for four- to five-year-old children and for six- to seven-year-old children)</p> <p>Pictorial format to reduce confounds related to the limited verbal abilities of young children and to increase comprehension of scale tasks by focusing childrens' attention on concrete pictures of activities that are believed to be common among young children</p> <p>Four domains: cognitive competence, physical competence, peer acceptance and maternal acceptance</p> <p>Administration: requires an examiner</p> <p>Age range: four to five years and six to seven years</p>
Self-Perception Profile for Children (19)	<p>Two-part questionnaire (36+10 items) to give a profile of self-esteem</p> <p>Four-point structured-alternative format intended to offset desirable responding</p> <p>Formatted to minimize respondent set</p> <p>Addresses five domains (scholastic performance, social acceptance, athletic competence, physical appearance and behaviour) in addition to global self-esteem</p> <p>Administration: 20 min, requires an examiner</p> <p>Age range: eight to 14 years</p>
Self-Perception Profile for Adolescents (20)	<p>Two-part questionnaire (45+16 items) to give a profile of self-esteem</p> <p>Four-point structured-alternative format intended to offset desirable responding</p> <p>Includes the five domains found in the children's assessment and adds domains of close friends, job competence and romantic appeal</p> <p>Administration: individual</p> <p>Age range: 14 to 18 years</p>
Self-Perception Profile for College Students (21)	<p>Two-part questionnaire (56+16 items) to give a profile of self-esteem</p> <p>Four-point structured-alternative format intended to offset desirable responding</p> <p>Similar to Self-Perception Profile for Adolescents with statements reworded to suit older individuals</p> <p>Administration: individual</p> <p>Age range: 18 and older</p>
Children's Self-Concept Scale (16)	<p>Measures overall self-esteem (provides an overall score of self-esteem)</p> <p>80 dichotomous (yes or no) items</p> <p>A standard score for the whole inventory is used to indicate the child's self-concept. Six hypothesized subscales yield scores in self-concept as it relates to behaviour, intellectual and school status, physical appearance and attributes, anxiety, popularity, and happiness and satisfaction</p> <p>Administration: individual or group, 20 min</p> <p>Age range: eight to 18 years, an examiner or at least a third-grade reading level</p>
Self-Esteem Scale (2)	<p>Designed to measure adolescent global feelings of self-worth (provides an overall score of self-esteem)</p> <p>Respondents are asked to strongly agree, agree, disagree or strongly disagree with the 10 items. Positive and negative items are presented alternately to reduce the effect of respondent set</p> <p>Administration: individual, 10 items</p> <p>Age range: adolescents</p>
Self-Esteem Index (1)	<p>Developed to assess attitudes toward one's self in general and in specific contexts</p> <p>Suitable for ranking examinees as having low, moderate or positive self-esteem</p> <p>The brevity of the inventory makes it well suited to research or to survey work when screening large populations</p> <p>Administration: 58 items (for children), 25 items (for adults)</p> <p>Age range: two forms – eight to 15 years, and 16 years and older</p>

References appear in parentheses

ISSUE DEFINITION

The present study adopted the following definition of self-esteem. Self-esteem involves a person's positive and negative self-evaluations (2), involving domains with varying importance. High self-esteem includes feelings of self-worth, power and the belief that one's self is competent to cope with the challenges of life and deserves happiness (6). Low self-esteem is defined as a feeling of worthlessness, with a negative impact on social interactions and a decreased resistance to psychological stressors.

METHODS

A search of MEDLINE, HealthSTAR and other Internet databases, and published texts on assessment tools was completed, and specific self-esteem and quality of life assessment

tools were identified and reviewed. Key words used for the searches included 'self-esteem', 'assessment', 'body image', 'self-perception' and 'facial paralysis'. The next step was to identify any assessment tool that could be applicable to a pediatric population. Several tools were identified; however, those that were not thoroughly peer-reviewed for reliability and validity were not analyzed.

RESULTS

Several tools have been used in the recent literature (9-12), and of those, the ones most widely used and applicable to children were selected and analyzed (Table 1).

The Coopersmith Self-Esteem Inventory (SEI) (1) is a widely used, brief assessment tool that allows for survey work when screening large populations. Consisting of two

forms, 58 items on a school form and 25 items on an adult form, it ranks examinees as having low, moderate or positive self-esteem. The result is an overall score rather than a profile of self-esteem. The SEI may be a useful tool for school settings (13), provided that its limitations of complexity and measurement of several characteristics in addition to self-esteem are understood.

The Rosenberg Self-Esteem Scale (2) uses a 10-item Likert Scale, has high reliability and scalability, was developed to be a brief tool, and is easy to administer and evaluate. Its brevity is highly practical for a clinical setting. It is highly adaptable to suit specific conditions (14,15). It has satisfactory reproducibility (92%) and scalability (72%). The scale is internally reliable and appears to have face validity, with better construct and convergent validity than that of the SEI (12). The tool alternates 'positive' and 'negative' items in order to reduce the effect of respondent set.

The Piers-Harris Children's Self Concept Scale (16) is a 20 min self-report instrument aimed at children aged 9 to 18 years. This tool has been used previously for the purpose of assessing children with facial deformities (17,18). It is an 80-item test assessing six aspects of a child's self-esteem: behaviour, intellectual and school status, physical appearance and attributes, anxiety, popularity, and happiness and satisfaction. Items are written at a third-grade reading level in simple declarative statements (eg, 'I am a happy person') and require a yes or no answer. At least one-half of the statements are negative in content to reduce the effects of acquiescence.

Harter tools are a series of measures developed for different age groups: the Self-Perception Profile for Children (19), the Self-Perception Profile for Adolescents (20), the Self-Perception Profile for College Students (21), as well as two versions of the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (22). These tools generally consist of two parts to the questionnaire: 'What I am like' and 'How important are these things to how you feel about yourself as a person?'. Items provide children with two somewhat opposing indirect and nonthreatening statements; the children first choose which statement describes them best, and then they choose whether the statement is 'Sort of true for me' or 'Really true for me'. The Harter Scale for Teens is of a similar format to the questions in the questionnaire for younger children, except the questions have been adjusted for an older age group. The downward extension of the original scale for children aged four to six, and seven to eight years (Pictorial Scale of Perceived Competence and Social Acceptance for Young Children) (22) has been converted from a text questionnaire to a pictorial questionnaire of 24 items. The assessment tool is introduced as a picture game called 'Which Girl/Boy is the Most Like Me', with pictures illustrating opposing situations. In contrast to text questionnaires, the pictorial format engages the young child's interest, is understandable, sustains the child's attention and leads to more meaningful responses. The pictorial format also allows one to depict skills and specific activities concretely.

DISCUSSION

While the functional outcome of surgery can be easily examined, its impact on the self-esteem of patients has not been studied thoroughly. Due to the complexity and the abstract nature of self-esteem, and to the lack of widely accepted assessment tools, there will always be a debate over how to best measure self-esteem.

Earlier tools such as the Coopersmith (1) and Piers-Harris (16) scales have sought to assess self-esteem through the calculation of a single score. In contrast, Harter's approach is based on a model of self-concept that represents an integration of two different approaches that have evolved in the self-concept and/or self-esteem literature. On the one hand, self-concept is seen as a unidimensional construct best assessed by combining an individual's self-evaluations across a range of issues. On the other hand, self-esteem is seen to depend on distinctions that individuals make about their competence in different domains of their lives. Harter's assessment of general self-esteem results from the relationship between one's competence and how important that competence is to the person. According to this conceptualization, the failure to achieve domain-specific competence has a negative impact on overall self-esteem, but only in those domains in which success is important. It is an approach that has been accepted in numerous studies, and has yielded a better understanding of children's behaviour (23,24).

A major issue in the assessment of children is the age-appropriateness of tools. Unlike assessment tools for adults, an assessment tool designed for children must be able to address various levels of maturity. The Rosenberg Self-Esteem Scale (2) and SEI (1) are not suitable for children under eight years of age. The Piers-Harris Children's Self-Concept Scale (16) attempts to address this issue by making its items easy to understand, especially in the presence of an interviewer. Although it has been used previously in assessments of children with facial deformities (17,18), its limitation is that it requires a minimum of grade three reading skills. Harter's approach to this problem is to devise a set of essentially similar instruments for the different age groups. The questionnaires for children over the age of eight years are of very similar format with items adjusted to reflect differences in the maturity level of the respondents. Harter uses pictorial scales for children under the age of eight years. The advantage of the pictorial format is that it is easily understood by children and is presented in an interest-stimulating fashion (25-27).

An additional concern that must be considered for all tools is bias and error. All assessment procedures are subject to variations (measurement error) that must be taken into account when drawing conclusions about behavioural and emotional functioning. There is a higher tendency to give socially desirable answers among younger children (22). To combat this natural tendency, Harter scales give children the permission to choose the half of a two-part item that is most like them and to rate whether the chosen half is just 'sort of true' or 'really true'. The opposite of socially desirable answers, 'faking bad' (exaggerating symptoms), is usually interpreted either as a bid for attention or as advice to get out

of some unwanted situation. Because children are less knowledgeable about any benefits that they may acquire as a result of presenting an unfavourable picture of themselves, it is likely that low scores on a self-esteem evaluation represent a true reflection. In general, while one cannot assume that all high scores reflect truly positive self-esteem, it is most likely that low scores represent the absence of positive self-esteem.

CONCLUSIONS

Based on the results of the present review, the authors recommend that health care workers use the Harter set of assessments for research purposes. These assessments apply to a wider age range and are able to measure global self-esteem, as well as its domains. The results are reported as a profile of self-perception across the various domains, rather than giving a final, single score on self-esteem. The Rosenberg Self-Esteem Scale and the Piers-Harris Scale were the two runners-up because the first is brief and the latter is well respected. For clinical settings in which brevity of an assessment tool is important, the Rosenberg Self-Esteem Scale is well suited.

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