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Children with cochlear implants: communication skills and quality of Life

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Abstract

Given the multidimensional scope of cochlear implants, there is a growing need to assess clinical measures related communicative abilities and more general aspects involved in the effectiveness of treatment, such as quality of life.

Aim: To translate and adapt an international questionnaire of quality of life to Brazilian Portuguese; to apply the questionnaire in parents of children with cochlear implant to assess quality of life of children after cochlear implantation; to analyze correlations among factors related to quality of life; to analyze correlations between quality of life and clinical measures of outcome.

Method: prospective study in which parents of children with cochlear implants responded to validated instruments on quality of life and communication abilities.

Results: The translation and adaptation of the questionnaire was satisfactorily completed. According to the data, cochlear implants had a positive effect on quality of life of the implanted children and their families. Observed correlations for the variable communication demonstrate a direct relationship between oral communication and other variables of quality of life.

Conclusions: This study makes this questionnaire available in Brazilian Portuguese. For parents of Brazilian children with cochlear implants, lexical development(acquisition and use of words) is the variable that relates most to the quality of life of their children.

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INTRODUCTION

Studies in the past 15 years have shown that the cochlear implant is an effective treatment for profound hearing loss in infants. Early restoration of auditory implant by cochlear implants significantly improve the communication skills, albeit with varied results[1,2]. While most children with cochlear implants become able to attend school regularly, other remain with significantly limited verbal communication skills[3].

It is known that the efficacy of cochlear implants depends on several factors. Many studies have searched for factors that improve the results. Duration of sensory deprivation, general development potential, possible concurrent conditions, age at surgery, anatomical/physiological and technological factors, and family involvement are examples of reported variables affecting the efficacy of cochlear implants[4-7].

Most studies on the impact of cochlear implants have focused on clinical assessments of efficacy (hearing and speech skills, and auditory thresholds). However, these measures are only part of the effect of cochlear implant treatment. Because of the major impact of deafness on communication, it is not clear how much clinical measures of efficacy (for instance, speech, hearing, and language measures) truly show the effectiveness of cochlear implants in general contexts (such as performance at home, at school, and in social settings). Single texts do not assess the ability of children to communicate their needs and wishes, or any improvement in self-confidence among children when interacting with normal hearing colleagues. There is evidence that clinical assessment results do not correlate with performance in unstructured settings[8].

Because communication skills and social life often change after a cochlear implant is placed, its efficacy should be assessed taking into account structure evaluation tests and instruments for assessing the ease of daily communication, social relations, well-being, and other components of quality of life[9,10].

A need to measure results more widely has stimulated an interest in using quality of life measures for assessing the impact of cochlear implants. Thus, generic multidimensional health tools to assess the quality of life of populations at large have been widely used. These tools are not necessarily sensitive enough in audiological evaluations or to assess the results of rehabilitation, as they do not detect clinically significant improvements in users of cochlear implants[11,12]. The potential psychosocial benefits of using cochlear implants – such as well-being and measures of health status – are not measured in these generic instruments[13].

Open and closed question interviews and questionnaires or semi-structured questionnaires usually are more informative for monitoring purposes after cochlear implant surgery than generic instruments. Specific questionnaires for cochlear implant users yield information about real life situations and help describe the child's activities and participation in various social ambiences. Thus, a valid study should use adequate tools for assessing the relevant quality of life issues in the target population.

Besides being excellent research tools, questionnaires are widely used for control and quality assurance purposes in clinical settings, irrespective of interviewees – whether patients or caretakers for pediatric groups. Questionnaires help standardize information about perceptions that parents and caretakers have about implants, and inform teaching and healthcare professionals.

There are few studies in the international literature on interviews and questionnaires that investigate the expectations of parents[1-3,8,14-16], their satisfaction level with implant placement[14,15], the stresses in this process[8], and cochlear implant user and family quality of life[8,14].

The Children with Cochlear Implants: Parent´s Perspectives (CCIPP), developed by Archbold et al.[17], is one of the most frequently used questionnaires for evaluating the quality of life in children with cochlear implants. The CCIPP is used worldwide in many cochlear implant centers (Ear Foundation, 2009) and has been described as an excellent research and clinical tool[17,18]. It is a validated and reliable questionnaire that is applied when studying the experience and opinions of parents about several aspects of the quality of life of children and their families following cochlear implant surgery[19-21].

Because of different cultures and healthcare system, changes in quality of life after cochlear implant surgery need to be studied according to cultural contexts and communication approaches. It is, therefore, extremely important to apply validated tools developed specifically for Brazilian children using cochlear implants, to assess their quality of life. Thus, the purposes of this study were:

1 – To translate and adapt the questionnaire Children with cochlear implants: parental perspectives (Ear Foundation) into Brazilian Portuguese.

2 – To apply the questionnaire to parents of children using cochlear implants and to investigate the quality of