

Chapter 7

Self-Determination Calibration for Cochlear Implant Rehabilitation

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ABSTRACT

Cochlear implantation is a well-established therapeutic approach for deaf or hearing-impaired patients. After the medical intervention, which aims to restore hearing, subjects undergo rehabilitation procedures in order to cure instructional disadvantages, problematic schooling circumstances, or deficits in their sociability. Essential physical, mental, social, and cognitive skills are taken into perspective, as the prerequisite of a notable aptitude determines the suitability of a subject to get professional and communal roles. Quality of life, as an indicator, provides the metrics that demonstrate the level of adoption with established norms.

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INTRODUCTION

For many years, cochlear implantation has served as a well-established therapeutic approach for patients with severe to profound sensorineural hearing loss. Cochlear implants are advanced electronic devices that work as an artificial ear, surpassing the outer and middle ear structures and stimulating directly the acoustic nerve.

The aim of this research is to investigate the impact of cochlear implantation on the Quality of Life in patients, and compare and correlate the above results to pure tone audiometry scores, speech recognition scores, and acoustic performance scores (Fletcher et al., 1992). Indeed, the disability for hearing sufficiently suppresses emotionally impaired in hearing subjects, as they are obviously deficient for sustaining adequate levels of human communication, depreciates significantly their learning efficiency and the continuity of their social interactions. As they experience a plodding degradation of their sensual awareness, they gradually loose their composure and self-possession for their emotional equilibrium. Drifting into a state of reduced excitational contact accompanied by a constantly limited promulgation of information to and from everything that exists outside themselves, they experience a deteriorating practical contact with facts and a limited observation of events that are crucial for acquiring knowledge and skills (Venail et al., 2010). Overall, they seemingly have deficient channels of communication for fully exerting their schooling potential, their social intelligence through time and their agility in performing tasks that are admonished for them in the general public's perception. In some occasions, this state may lead to agoraphobia and isolation.

Therefore, this research aims to measure the success of the rehabilitation procedures by introducing Quality of Life metrics. When a patient undergoes therapeutic treatment for his hearing disability, it is not given as a necessary or inevitable result that he will re-enter the schooling and social communities of normally hearing people without becoming annoyed or anxious (Baker et al., 2009). A series of mental faculties and cognitive phenomena take place that severely affect the psychological equilibrium of the person receiving treatment, not counting the implications with the group of people directly associated with him or her (Clarke – Stewart et al., 2003).

In this survey, pure tone audiometry scores, speech recognition scores, and acoustic performance scores were obtained for all patients after cochlear implantation. In addition, all patients were administered the Profile

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