

Critical Review: Do adult cochlear implant (CI) recipients over 70 years of age experience similar speech perception/re





the nature of the study did not allow for blinding or randomization, the methods of the study may be termed valid. Testing with measures simulating both quiet and noisy environments, as well as allowing implant users to use their preferred speech processing strategy all contribute to the validity. The statistical manipulations carried out were such that differences between the groups were adequately described. The study provided a second level of evidence with good validity overall. These results suggest that adult CI recipients over 70 years of age do experience speech perception/recognition gains postoperatively in comparison with younger CI recipients, but that the younger groups tends to receive more benefit. This difference was significant for only one of the three measures.

Poissant et al. (2008) presented a well-formulated rationale for their study, and the inclusion of an elderly HA group was good for comparison purposes, although this group was not considered to be CI candidates. As recognized by Poissant et al. (2008) the numbers in each of the groups was quite small and could limit validity, as there can be a large amount of variability in results between CI recipients.

recipients having generally lower preimplantation scores, as demonstrated by Vermeire et al. (2005). However, it has been consistently demonstrated that elderly adults over 70 years of age do experience benefit from cochlear implantation. Younger age adults do tend to score higher on postimplantation measures, but in general this difference was small and nonsignificant for studies with the highest validity.

The improvement in postimplantation speech recognition/perception scores applies to stimuli presented in both noise and in quiet. Sterkers et al. (2004) suggested that there was some indication that increasing the speed of presentation of stimuli could cause the performance of elderly adult CI recipients to decrease and become significantly poorer than younger adult performance. Exploring the effect of an increase in presentation speed on the performance of elderly adult CI recipients is a topic for future research.

Despite concerns from researchers regarding age-related differences in performance and possible surgical complications related to age, it is clear that elderly adults do experience substantial benefit from cochlear implantation, and that this increase in performance is in fact comparable to that experienced by younger adult recipients. Cochlear implantation is therefore a viable option for the rehabilitation of elderly adults over 70 years of age who are suitable candidates for cochlear implantation.

### *References*

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