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REHABILITATION OF THE HEARING IMPAIRED INFANTS

Jiyeong Yun, Jinsook Kim and Junghak Lee

Hallym University, South Korea

Background: The auditory rehabilitation and assessment of the early communication skills of the hearing impaired (HI) infants are quite challenging. The aim of this study was to confirm the effective method and value of the early auditory rehabilitation. Additionally, the communicative skills of the infants were compared with the chronological age (CA) and the hearing age (HA) which reflected the periods of hearing sounds by amplification system and appropriate rehabilitation.

Methods: Recently developed the Korean Auditory, language and cognitive rehabilitation for infants (KARI) program was applied as a method of rehabilitation. The contents were composed of the evaluation materials, parent education and counseling materials and professional guidelines. The case studies of 12 infants from 1 to 24 months old were performed and evaluated with sequenced language scale for infants (SELSI), MacArthur-Bates communicative development inventories (M-B CDI), Communication and symbolic behavior scales developmental profile (CSBS DP). The effect of the KARI program was further examined comparing the developmental progress between HA and CA of the 19 HI and 21 normal hearing infants.

Results: After applying KARI program, the scores were enhanced in all evaluation tools with the statistical significance ($p < 0.05$). SELSI scores in receptive and expressive languages increased from 19.76 to 26.76 and from 16.28 to 22.16. The scores of M-B CDI was enhanced from 6.1 to 18.8 in vocabulary expression, from 85.6 to 121.7 in vocabulary comprehension and from 20.3 to 30.8 in gesture and play. CSBS DP scores increased from 32.36 to 38.89. Also in the comparison between HA and CA for HI group, the scores of HA were significantly better for all the materials ($p < 0.05$) except the production score of M-B CDI.

Conclusion: The auditory rehabilitation was proved to be effective in enhancing communicative skills for facilitating developmental progress for the HI infants.

BIOGRAPHY

Jiyeong Yun has received her Bachelor's Degree at the Hallym University, Republic of Korea (ROK). She is a master student in audiology at the Graduate School of Hallym University. She participated in the global training on age-friendly services and institutes at University of Texas Arlington, USA in January of 2016 and speech-hearing program at John A Burns School of Medicine, University of Hawaii in February of 2019. Currently, she is working as a teaching assistant and honored as a scholarship student of Brain Korea 21 programs for leading universities and students. She has participated for the investigation of Korean version of 'Listen, Learn and Talk' and 'Adult cochlear implant home-based auditory training manuals' of Cochlear Ltd., and is now involved in several research papers such as "A Case study of KARI, early communication skills of children and phonological development" in Korean infants from 4 through 24 months.

jiyeongyun95@gmail.com