

MEASURING CHANGES OF AUDITORY INFORMATION PROCESSING FOLLOWING THE USAGE OF EDULINK IN CHILDREN WITH AUDITORY PROCESSING DISORDER

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This case controlled study aimed to measure the changes in auditory information processing ability following the use of Edulink in children with auditory processing disorder. The study involved 28 subjects from a primary school in Kuala Lumpur. The subjects chosen were native Malay speakers with normal hearing, age ranged from 8;0 to 9;11, normal IQ (>80), poor academic performance and failed the Malay Dichotic Digit test. Subjects were divided into experimental (14 students) and control (14 students) groups, matched according to gender, age and their IQ level. Subjects in the experimental group wore the Edulink during the school hours for 5 days a week for 10 weeks of time while subjects in the control group were not fitted with Edulink. Rey Auditory Verbal Learning Test (RAVLT) and Digit Span (DS) tests were administered to measure the auditory processing ability of the subjects from both groups. Results showed significant differences in the mean scores for pre- and post-Edulink usage for the Working Memory ($t(13)=-3.77$, $p=0.02$) and for Retention of Information ($t(13)=-3.20$, $p=0.01$) in the RAVLT test. Besides that, the digit forward (DF) and digit backward (DB) mean scores also revealed significant differences between pre- and post-Edulink usage with $t(13)=-2.59$, $p=0.02$ for DF and $t(13)=-3.00$, $p=0.01$ for DB. When the magnitude of the difference scores were compared between the experimental and control groups, results for the Working Memory were found to be significant [$t(26)=-2.11$, $p=0.04$]. The fact that significant improvement in the Working Memory scores and thus, the efficiency of processing auditory information in the experimental group as compared to the control group who did not wear the Edulink, suggest that Edulink could be useful in helping APD children in improving their ability in processing auditory information.

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