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## The effect of tablet PC-based cognitive training program (Injini) for children with cognitive impairment

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**Background:** Computerized cognitive training becomes most popular and accessible form of cognitive training (CT). Evidences suggest CT facilitates cognitive function, while most of the studies targeted on children older than 6 years age. Touch screen technology can promote motivation and apply to very young children or children with lower cognitive level.

**Aim:** This study evaluated the applicability and efficacy of the tablet PC-based CT program for children with cognitive impairment of cognitive ages between 18 and 36 months.

**Method:** 28 subjects between cognitive ages 18 and 36 months were recruited and randomly assigned to a training group (n=14) and a control group (n=14). Training group received tablet PC-based CT program (Injini) for 30 minutes a day, twice a week, for 12 weeks, by experienced occupational therapist. The control group received traditional rehabilitation program only. Cognitive function was assessed by psycho-developmental measurement scales which include Bayley Scales of Infant Development II (BSID II), Pediatric Evaluation of Disability Inventory (PEDI), Laboratory Temperament Assessment Battery (Lab-TAB) and Goal Attainment Scale (GAS) at baseline and after the completion of 12 weeks intervention.

**Result:** There was no significant difference between the training and control groups in the scores of psycho-developmental tests at baseline. After 12 weeks of training, training group showed significant improvements in all domains. Control group also showed improvements in almost domains except manipulation domain of Lab-TAB. Comparing the two groups, training group had greater increments in BSID II, social function domain of PEDI, observation and manipulation domains of Lab-TAB, and GAS, than control group.

**Conclusion:** Tablet PC-based CT was feasible and showed promising results in children with cognitive impairment of cognitive ages between 18 and 36 months. More works are needed to study lasting effects and real-world application of CT.

### Biography

Jin Sook Yuk, M.P.H., OTR earned a Bachelor of Science in Occupational Therapy from Yonsei University, Master in Health Policy & Management from Yonsei University. I am licensed as an occupational therapist in Korea. She has been primarily in the area of pediatric occupational therapy. Her research interests are on occupational therapy interventions with infants and young children in the hospital.

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