

Thesis Title	Effect of Nine Square Exercise on Functional Ability and Cognitive Function in Adults with Intellectual Disability
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ABSTRACT

This study aimed to examine the effects of Nine square exercise (NSE) using an Illuminated Nine-Square Dance Pad (INSP) on functional ability and cognitive function in adults with intellectual disability (ID). A randomized controlled trial with assessor blinding was conducted at Rajanukul Institute, Bangkok, Thailand. Forty-six adults with mild to moderate ID were randomly assigned to an experimental group (n = 23) or a control group (n = 23). Both groups participated in 60-minute training sessions, twice a week, for 4 weeks. Functional ability was assessed using the 10-Meter Walk Test (10MWT), Timed Up and Go Test (TUG), Five Times Sit-to-Stand Test (FTSST) and Six-Minute Walk Test (6MWT). Cognitive function was assessed using Simple Reaction Time (SRT), Choice Reaction Time (CRT) and Trail Making Test Part A (TMT-A). After 4 weeks of training, the experimental group showed significant improvement in all functional outcomes and in SRT, SRT accuracy, CRT, CRT accuracy, and TMT-A, while the control group improved only in FTSST, 6MWT, SRT accuracy, and CRT accuracy. Between-group comparisons showed greater improvement in 10MWT, TUG, and SRT in the experimental group. The findings suggest that this program may improve functional ability and cognitive function in adults with ID.

Keywords: Intellectual Disability, Nine Square Exercise, Functional Ability, Cognitive Function, Rehabilitation