Effects of a Physical Activity and Brain Exercise Program on Cognitive Ability of Healthy Thai Elders

Mayuree LEETHONG-IN, Sirimart PIYAWATTANAPONG, Sawitree SOMMONGKOL, Supavadee THHIENGTHAMI, Nutda KUMNIYOM

Abstract

This study used a quasi-experimental single-group time series design to compare the effects of physical activity and brain exercise program on the cognitive ability of healthy Thai elders. It was conducted from December 2015 to May 2016. A purposive sample of 23 people of over 60 years of age was used. The research instruments consisted of 1) the Mini-Mental State Examination Thai 2002 (MMSE-Thai 2002), 2) the Montreal Cognitive Assessment (MoCA, Thai version), and 3) the physical activity and brain exercise program devised for this research. The program components were validated and reviewed by 3 experts and yielded a content validity index (CVI) of 0.96. Participants attended the program 8 times (3 h each) over 5 consecutive weeks. Subsequently, participant follow-up progress reviews were done in weeks 10, 14, and 18. Data were analyzed using descriptive statistics and ANOVA with Wilcoxon matched-pairs signed-rank test and repeated measures ANOVA. Results revealed that the average score for cognitive ability (mental state and cognitive function) in weeks 10 and 14 and at follow-up in week 18 were statistically significantly higher (p < .05) than the baseline. Recommendation: the physical activity and brain exercise program could improve cognitive ability and should be included in health promoting activities in elders' clubs or senior schools in the future.

Keywords

Physical activity, brain exercise program, cognitive ability, healthy elders

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examining the effects of physical activity interventions, to determine which factors determine what, Gow told LiveScience. “We are

Five studies investigated the effects of physical activity on cognitive development in preschool children. Measurements of cognition considered a wide range of cognitive outcomes, including language, academic achievement, attention, working memory, and executive functioning. Amongst these studies, four demonstrated positive effectiveness of activity-based interventions on cognitive functioning while one failed to find significant improvements following a multidimensional lifestyle intervention. How physical activities are connected with brain development and health? These and similar questions on the benefits of physical exercise for a healthy mind and sparked numerous research studies. To be definitive, we do of course need more large-scale trials
following up the same individuals [for] repeat lifestyle assessments and brain scans, which will allow us to examine the direction of the associations in more detail.”. Here are the most important benefits of physical exercise for brain and mental health. Inactivity leads to a decline in cognitive abilities. In the past for the man to survive they were forced to move.