col. The participants were administered the Stroop Test after 30 min of aerobic exercise with moderate intensity and after a reading control condition; a counterbalanced order was implemented. Results Results indicated that shorter response times and an increased accuracy rate in both Stroop Test conditions were observed following the cessation of exercise. In addition, superior beneficial effects of acute exercise were detected in older adults with higher fitness levels relative to adults with lower fitness levels. Discussion These findings suggest that acute exercise leads to general improvements in multiple cognitive functions and specific improvements in executive function. In addition, older adults with higher fitness received more beneficial effects resulting from acute exercise, implying the need to exercise on a regular basis. Contact cchu042@yahoo.com

FREQUENT EXERCISE BEHAVIOR DOES NOT RETARD THE ACTUAL ACADEMIC ACHIEVEMENT

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Introduction. In the past, there had been a common misconception that frequent exercises lead the decline of academic ability due to reduction of studying. Recently, several reports have explained the positive relationships between academic ability and exercise (Hillman et al., 2008). However, most of which have been focused on the relationship between test scores rather than total academic performance in school. It is also necessary to consider the influence of other sources such as household income, parents' educational background, and lifestyle which is thought to be involved in academic performance. The purpose of this study is to reveal the influences of exercise behaviors on the school grades as the actual academic achievement in consideration of other factors in Japanese junior high school students. Methods. Participants were 278 male students (body mass index (BMI): 19.3+/-3.2) and 240 female students (BMI: 19.0+/-2.8) of 1st grade (7th grade in USA style) in public junior high schools in Japan. All students and their parent completed the questionnaires about the exercise behavior, household income, and life style including home learning habits. BMI and academic performance (school grades) were received from school records. The sum total of the 5 subjects grades (Japanese, social studies, math, science, and English) were used as the academic achievement score. Results. Using ANCOVA that controlled for several covariates (household income, mother's educational background, home learning frequency, amount time of TV watching, amount time of Videogame/Cell-phone using), high frequent exercisers (5-7 days/week, mean grade: 17.8+/-4.0) and medium frequent exercises (2-4days/week, mean grade: 18.3+/-5.3) had significantly higher school grades than less exercisers (0-1 days/week, mean grade: 15.4+/-3.7, $p<0.05$) in male students. On the other hand, in female students, high frequent exercisers (19.6+/-3.2) and less frequent exercisers (18.3+/-4.0) had significantly higher school grades than medium frequent exercisers (16.8+/-4.2, $p<0.05$). Conclusions: These results suggest that high frequent exercises do not retard the school grades as the actual academic achievement. Furthermore, the tendency of positive influences of exercise on school achievements has been revealed prominently among male students. Acknowledgements: This study was supported by Challenging Exploratory Research and Scientific Research C from Grants-in-Aid for Scientific Research in Japan. References: Hillman, C. H., et al., (2008). Be smart, exercise your heart: exercise effects on brain and cognition. Nat Rev Neurosci. 2008 Jan; 9(1): 58-65. Review. Contact nakajima@hit.ac.jp

ANALYSE OF CLINICAL EXERCISE PROGRAMS IN THE TREATMENT OF CLINICAL DEPRESSION: RANDOMIZED CONTROLLED TRIALS

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Introduction Several exercise randomized controlled trials (RCTs) have been proposed as a viable treatment for depression. However, there are conflicting data and some research has shown that exercise, as a treatment, is not effective for depression. The aim of the present study was to evaluate the reported impact of exercise frequency, intensity, session duration, type of exercise, intervention duration, in the success of therapeutic interventions in depression. Methods A systematic review was undertaken on RCTs research reports published in peer-reviewed journals between 2010 and 2013. The databases searched were: Pubmed, Cinahl, Medline, Psychinfo and Psycharticles. Results A total of seven papers were reviewed and five of them reported a significant contribution (71. 43%) effect in the treatment of depression. Results showed that the majority of the interventions were based on aerobic training protocols. The therapeutic programs were based on 30 to 45 min. sessions, and were implemented three times a week, throughout 10 to 12 weeks. In regard to exercise intensity results remains unclear. Discussion / Conclusion Chalder et al. (2012) in a one trial study, based on the non-observation of positive effects of exercise in clinically depressed subjects, reported some methodological inconsistencies. In fact the majority of studies published do not report the protocols used, namely describing both the physical exercise intensity and dosage applied. Methodological flaws might explain the inconsistency in the reported results found in the literature. Recently published studies, with better research designs, suggest that physical exercise tends to improve the patient's response to treatment. In future studies, RCTs should be more specific describing the structure of the exercise program and the exercise volume and intensity (dosage). As a complement to drug based therapeutics to improve mental health, exercise treatment research reports should provide specific recommendations for patients and clinical practitioners. References Chalder, M., Wiles, N. J., Campbell, J., Hollinghurst, S. P., Haase, A. M., Taylor, A. H., . . . Lewis, G. (2012). Facilitated physical activity as a treatment for depressed adults: randomised controlled trial. British Medical Journal (Clinical Research Edition), 344. doi: Artn E2758Doi 10.1136/Bmj.E2758 e-mail: larafcarneiro@gmail.com

EFFECTS ON MOOD AND SLEEP QUALITY OF THE ELDERLY IN THE DIGITAL ORIENTIAL QIGONG EXERCISES INTERVENTION

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Introduction According to the investigation of sleep medicine association, one out of five people experience long-term insomnia. Many studies suggest that oriental qigong exercises can stabilize mood and improve sleep quality. The aim was to investigate and collect Shiang Kung and Kang-In Dance (ESK), Ping-Shuai Gong(EXP), and Wai Tan Kung(EXW) audio-visual teaching materials, and set up the web-based motor learning of movement skill assisting platform for middle-aged and elderly people, in the hope of stabilizing mood and improving sleep quality, thus improving the quality of life. Methods 187 subjects were divided into experimental group (93/EX, including ESK, EXP, and EXW group) and control group (94/CO). Three questionnaires and scales were used as assessments tools for the first year. In the second year, digital audio-visual technologies of oriental qigong exercises were implemented to help support the assessment of