Pengaruh sudoku terhadap fungsi memori kerja dan fungsi kognisi global pada usia lanjut sehat di panti wreda = Effects of sudoku training on working memory and cognitive function among nursing-home residents

Helda Aprilia, author

Abstrak

ABSTRAK
LATAR BELAKANG. Memori kerja merupakan ranah kognisi yang bertanggungjawab

terhadap sebagian besar masalah kognisi yang dialami seorang
usia lanjut.Tujuan penelitian ini adalah untuk mengetahui manfaat mengisi
Sudoku terhadap fungsi memori kerja dan fungsi kognisi global usia lanjut.
METODE. Desain studi adalah uji klinis tidak tersamar. Subjek merupakan
warga Panti Sosial TresnaWerda I dan III DKI Jakarta yang diambil secara
konsekutif kemudian dibagi acak menjadi dua kelompok, perlakuan dan kontrol.
Kelompok perlakuan melakukan latihan Sudoku 3x/minggu selama 12 minggu.
Memori kerja dinilai dengan Trail Making Test part B (TMT-B), fungsi kognisi
global dinilai dengan Montreal Cognitive Assesment versi bahasa Indonesia
(MoCA-Ina).
HASIL. Terdapat 24 subjek pada kelompok perlakuan dan 27 subjek pada
kelompok kontrol. Terdapat 13 subjek yang memberikan kesan positif terhadap
latihan Sudoku. Penurunan waktu penyelesaian TMT-B sebesar 11,1 detik pada
kelompok perlakuan dan 18,8 detik pada kelompok kontrol, meskipun tidak
didapatkan perbedaan bermakna antar kedua kelompok (p = 0,816). Terdapat 8
subjek (33,3%) dari kelompok perlakuan dan 11 subjek (40,7%) dari kelompok
kontrol yang mengalami peningkatan nilaiMoCA-Ina (p = 0,530).
KESIMPULAN. Sudoku belum terbukti dapat meningkatkan fungsi memori
kerja dan fungsi kognisi global pada usia lanjut sehat, namun peningkatan fungsi
memori kerja yang terlihat pada kedua kelompok menandakan adanya plastisitas
neural pada usia lanjut yang bermanfaat untuk pemeliharaan fungsi kognitif.
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ABSTRACT
BACKGROUND. Working memory deficit is responsible for most of the
cognitive problem experienced by older adults.The aim of the present study was to
determine whether Sudoku training might improves these deficits and if so,
whether such changes might be transferred to other cognitive domains.

METHODS. This was non-blinding randomized controlled trial. Subjects were
consecutively taken from Panti Sosial TresnaWerda I dan III DKI Jakarta after

series of screening. All subjects were assessed with Indonesian version of Montreal Cognitive Assessment (MoCA-Ina) for cognitive function and Trail Making Test part B (TMT-B) for working memory. The experimental group was given 12 weeks of cognitive alternate-day training based on Sudoku exercises.

RESULTS. There are 24 subjects in experimental group and 27 subjects in control group. Nine subjects from each group showed improvement in the TMT-B completion time, although this difference were not statistically significant (experimental group 11.1s Vs control group 18.8s; p = 0.816). There were 8 subjects (33.3 %) on experimental group and 11 subjects (40.7 %) on control group had increment in MoCA-Ina scores (p = 0.530). Thirteen subjects reported improvements in memory, attention and concentration span.

CONCLUSIONS. The use of Sudoku as one of the cognitive training tools on elderly still need further study and discussion regarding limitation of this present study. But the improvement of working memory function as seen in result provides potential brain plasticity for maintaining cognitive function in elderly. ;BACKGROUND. Working memory deficit is responsible for most of the cognitive problem experienced by older adults.The aim of the present study was to determine whether Sudoku training might improves these deficits and if so, whether such changes might be transferred to other cognitive domains.

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