

Effects of exercise on cognitive functioning in adults with serious mental illness: A meta analytic review

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Abstract

Cognitive performance is usually impaired in those with serious mental illness (SMI). Exercise may improve cognitive functioning, but studies examining the effects of exercise in SMI indicate heterogenous findings. To estimate the effects of exercise on cognitive outcomes in people with SMI. Randomized controlled trials evaluating the acute or chronic effects of exercise on cognitive functioning in SMI were searched from inception to December 26th, 2022 on major electronic databases. Random effect meta-analyses were conducted to assess the effects of exercise on over the cognitive domains and Standardized Mean Differences (SMD) and 95% confidence intervals (CIs) were used as the effect size measure. Funnel plots and Egger's test of effect size and the Trim and Fill procedure applied if evidence of publication bias was noted.

Methodological quality was assessed using RoB 2. A total of 15 chronic (1 acute), 936 participants (46.7% women). Exercise showed large effects on reasoning and problem solving; small effects on executive functioning. Per diagnosis, exercise showed moderate positive effects on executive functioning and large effects on processing speed in people with depression; large effects on reasoning and problem solving in people with schizophrenia. The present study indicates a large beneficial effect of chronic physical exercise on reasoning and problem solving and small effects on executive functioning in people with SMI. © 2023 Elsevier B.V.

Author keywords

Cognitive functioning; Exercise; Mental Illness; Physical Activity