

The Effectiveness of a Community-based Exercise and Educational Programme on Depression in Greek Population with Parkinson's Disease

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Background: Although depression is among the most common symptoms of Parkinson's disease (PD), there is insufficient evidence to draw strong conclusions about the antidepressant effects of exercise in PD.

Purpose: To examine whether a community-based exercise and educational programme could produce short- and long-term effects in depressed patients with PD.

Methods: A RCT was conducted following the steps of the CONSORT statement. 70 participants, with clinical levels of depression (HADS-D score ≥ 8), were randomly allocated by a computer programme either to an 8-week supervised multimodal, group-based exercise and educational programme (n= 35) or an unsupervised individualised home-based training programme (n= 35) receiving printed material. During the three-month follow-up period, all the participants followed an individualised home-based exercise programme. The HADS-D was the primary tool that was selected to assess depressive levels and a satisfaction questionnaire to collect qualitative data. Quantitative data were analysed using SPSS (version 22.0) and qualitative data by content analysis.

Results: One-way repeated measures of ANOVA showed that the depressive scores were significantly improved only in the intervention group over time ($p = .00$; $t1-t2$: $p = .00$; $t1-t3$: $p = .01$), and the magnitude of the effect was medium ($t1-t2$: $r = .40$; $t1-t3$: $r = .31$). Improvements in mood were also reported by the participants.

Conclusions: Depressed patients with PD are able to obtain short- and longer-term antidepressant benefits from commencing a structured, low-cost exercise and educational programme.

Keywords: depression, exercise, physical activity, Parkinson's disease

