



Evidence on exercise prescription for additional Depression treatment: A meta-analysis of randomized controlled trials

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Abstract

Objectives: The present study aimed to clarify (1) the effect of ET as a monotherapy or complementary treatment of pharmacological therapy; and (2) changes in the dose-response for different exercise prescription characteristics.

Methods: We sought Randomized Controlled Trials (RCT) published in peer-reviewed journals between 2003-2019 in Scopus, Cochrane, Pubmed/Medline, ISI Web of Knowledge and APA PsycNET databases. We found 1,165 articles and selected 15 studies to this meta-analysis. RCTs with different ET and PT prescriptions were examined using the delta (pre and post-intervention) of a validated depression scale compared to the control group in different treatment conditions.

Results: Standardized mean differences and confidence intervals (SMD, 95% CI) were found for ET with or without PT group (-0.45, -0.62 to -0.29), ET and PT group (-0.70, -1.00 to -0.40), and only ET group (-0.39, -0.57 to -0.21). The subgroup analyses showed a moderate and large SMD in favour of resistance training (-0.67, -1.22 to -0.12), aerobic exercise 60-80% of maximum heart rate intensity (-0.56, -0.89 to -0.23), 20 to 30 minutes (-0.59, -0.88 to -0.31) or 45 to 60 minutes (-0.55, -0.81 to -0.29) duration per session, and seven times per week (-0.75, -1.30 to -0.20).

Conclusions: ET plus PT showed a better effect on reducing depressive symptoms, and the exercise prescription that shows the best dose-response in subgroup analyses can be the target for ET in depression.



Biography

Lara Carneiro, BsC (Sports Science), Msc and PhD is a Lecturer in the exercise and mental health field. She was a PhD fellow in 2012 by the Portuguese Foundation for Science and Technology, after leading a trial of exercise for major depressive disorder. In 2014 she was awarded the first prize of Psychology and Pedagogy in Sports with the investigation "Exercise as a complementary treatment of pharmacotherapy in patients with clinical depression" by the Portuguese Olympic Committee and the Millennium BCP Foundation. She is interested in the effects of exercise on major depressive disorder, its moderators, and its neurobiological correlation. She has participated in national and international conferences as an invited speaker and keynote.

Publications

1. Exergames and its effects on mental health
2. Effects of structured exercise and pharmacotherapy vs. pharmacotherapy for adults with depressive symptoms: A randomized clinical trial.
3. Bibliometrics of CNS & Neurological Disorders - Drug Targets: An International Evolution Along Time

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