Sports therapy interventions and symptom severity in unipolar depression: an intervention study

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Background

The effectiveness of exercise on depression symptoms has already been scientifically proven many times [1, 2]. However, studies investigating the influence of physical activity on depression symptoms during day hospital treatment under care-related conditions are still limited [3]. The present study therefore investigates the effect of exercise therapy measures in the day-care treatment of depression in a psychiatric-psychosomatic specialist hospital.

Methods

This is an intervention study. The IG comprised 37 subjects in a day clinic treatment setting with a depressive disorder as their main diagnosis (F.32 / F.33), who completed an average of 2.42 training sessions per week in sports therapy over a period of 4 - 9 weeks. In contrast, the CG is made up of 20 test subjects in a day clinic setting with an equivalent depressive disorder, who only completed an average of 0.16 training sessions per week over a treatment period of 4 - 9 weeks. The BDI-II is used to record the severity of depression symptoms, which both the IG and CG subjects answer before and after their day-care treatment. It is being investigated whether the study participants in the IG and KG differ significantly in their BDI-II score at discharge. To investigate whether regular participation in the sports therapy programmes (strength and endurance training) during a day clinic treatment setting leads to an individual improvement in endurance performance in the IG, the test subjects complete a submaximal, bicycle ergometric step test (PWC test) at the beginning and end of the

Results

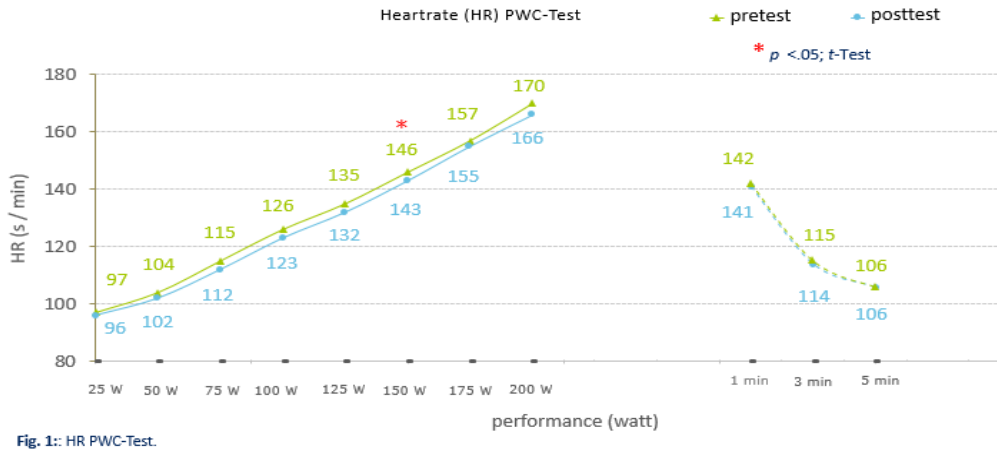


Fig. 1:: HR PWC-Test.

In the pre-post comparison of the PWC 130 / 150 (at a HR of 130 and 150 bpm), the IG test subjects achieved a significant increase in performance of 7 and 12 watts respectively (p <.05; t-test). In addition, the HR at the submaximal load level at 150 watts decreased from 146 bpm in the pre-test to 143 bpm in the post-test (p <.05; t-test). No changes were observed in the 5-minute recovery phase of the PWC test. Both groups showed a significant reduction in the BDI-II value after treatment (IG = -16, p <.001; KG = - 8, p <.05). However, the 'athletes' showed a significantly greater reduction in depression symptoms compared to the CG (ΔBDI-II; M = - 8, p <.01). There was no significant difference in the BDI scores of the two groups on admission.

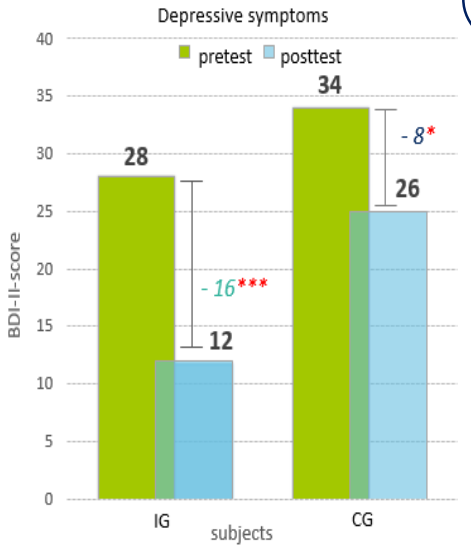
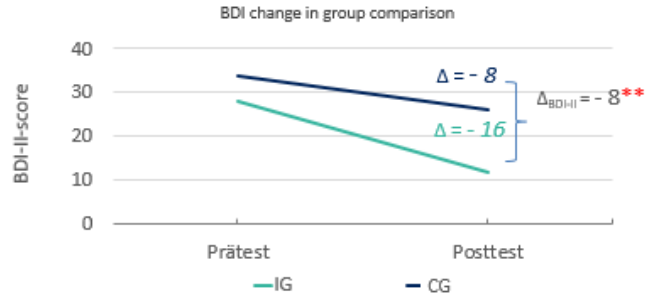


Fig. 1: BDI-II values in the pre-post comparison between IG and CG.



* p <.05; t-Test ** p <.01; t-Test *** p <.001; t-Test

Fig. 3: Δ_{BDI-II} in group comparison IG and CG.

Diskussion

Regular physical training leads to a significant improvement in endurance performance and a reduction in the severity of depression symptoms as part of a 4 to 9-week day clinic treatment. There was a significantly greater reduction in the BDI-II value in the IG (-57 %) compared to the KG (-24 %). This stronger 'antidepressant' effect could be in the context of regular physical activity and the associated increased endurance capacity [5], as the other therapy setting of both subject groups is identical. In the context of an increased risk of comorbidities and a certain relapse rate in depressive disorders, the focus of treatment should also be on how to achieve a longer-term change in behaviour in terms of a physically active lifestyle.

Referenzen

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