

Do behaviour change interventions for physical activity improve physical activity behaviour and quality of life in those with chronic obstructive pulmonary disease?

A systematic review and meta-analysis

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Background

People with chronic obstructive pulmonary disease (COPD) demonstrate low levels of physical activity [1]. This systematic review and meta-analysis aimed to examine behaviour change interventions that promote physical activity for adults with COPD.

Methods

Eight databases searched from inception until Feb 2022. Outcomes of interest were physical activity and quality of life outcomes. Behaviour change interventions were mapped to Michie's Theoretical Domains Framework (TDF). A meta-analysis and narrative synthesis were conducted. The Cochrane risk of bias tool and the GRADE criteria were used to evaluate bias and the quality and certainty of the evidence.

Results

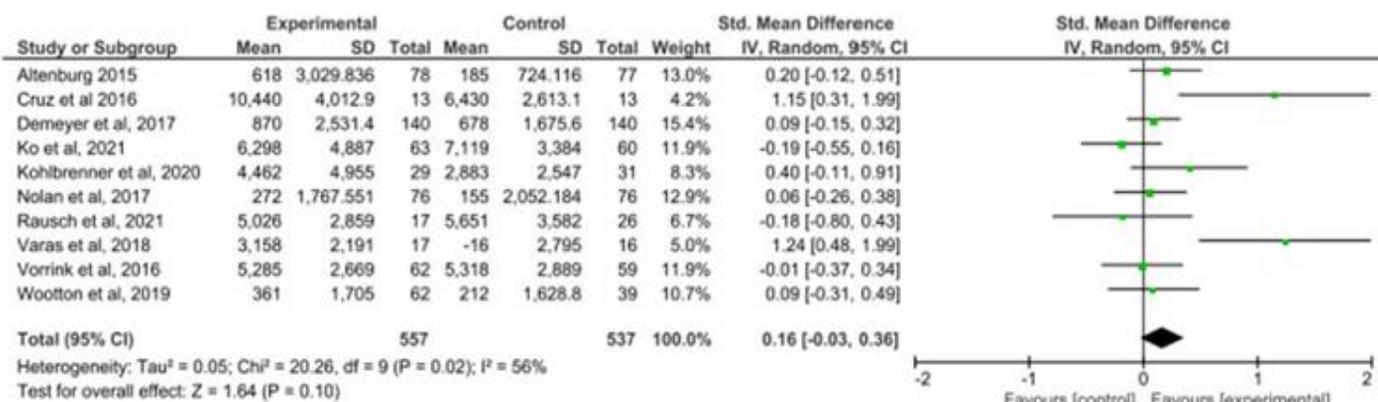
12 RCTs included in the review (n= 1211) and these were assessed for quality and certainty of the evidence (GRADE) and risk of bias (Cochrane Rob2)

Steps per day, physical activity levels, exercise capacity and quality of life most frequently utilized outcome measures

26 BCIs identified: Counselling, stepcount monitoring, social support and goal setting most frequently utilized behaviour change interventions.

A meta-analysis of comparable studies demonstrated that behaviour change interventions had no significant long-term impact on steps per day when compared to control groups (SMD 0.16, 95% CI -0.03, 0.36; p=0.10).

When mapped to TDF, domains of goals, behaviour regulation and social influences related to some significant short-term improvements (up to 12 weeks) in physical activity and quality of life outcomes across six studies only.



Conclusion

People with COPD may benefit, in the short-term, from behaviour change interventions to improve their physical activity behaviour and quality of life, however, long-term benefits are less clear. The overall certainty and quality of the evidence is low.