The hand-held fan & the Calming Hand for people with chronic breathlessness: a feasibility trial

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European Respiratory Journal 2017 50: PA749; **DOI:** 10.1183/1393003.congress-2017.PA749

Abstract

Introduction: Airflow from the hand-held fan (HHF) or performance of the Calming Hand (CH), a thinking strategy, may be useful for people with chronic breathlessness.

Objective: To test the feasibility of a Phase III randomised controlled trial (RCT) comparing the HHF vs CH for the relief of exertion-induced breathlessness due to cardio-respiratory conditions.

Methods: Single site, Phase II, "2x2" factorial, non-blinded, mixed methods RCT. Participants were randomised to usual care (self-management and exercise advice) or added HHF or CH or both. Study measures: recruitment rates; acceptability; data quality; potential primary outcome measures; incremental shuttle walk test [ISWT]; recovery time from exertion-induced breathlessness; Life-space; General Self-Efficacy Scale [GSES], and breathlessness numerical rating scales [NRS]. Willing participants and carers were interviewed at study end (day 28).

Results: 53 people were screened, 40 randomised and completed; (mean age 72 years (SD 9.8), 70% male; screening:consent = 1.5:1). There were few missing data (2 missing ISWTs). The best candidate primary outcome was judged to be recovery time; (HHF; mean 130.5 secs (SD 64.6), range 74-305; mean change from baseline -33.5 secs, 20.4% faster, vs CH; mean 146.0 secs (SD38.9), range 89-200 ; mean change from baseline 5.7 secs, 4.1% slower). Qualitative data indicated that faster recovery time improved self-efficacy. Patients identified the HHF as a helpful "medical" device, but did not find the CH useful.

Conclusion: A future Phase III RCT is feasible. Mixed method data synthesis supports recovery time as a novel, meaningful outcome measure. The data do not support the use of the CH.