Tailored psychological intervention for anxiety or depression in COPD (TANDEM): a randomised controlled trial

Stephanie J.C. Taylor1,16, Ratna Sohanpal1,16, Liz Steed1, Karen Marshall2, Claire Chan1, Nahel Yaziji3, Amy C. Barradell4, Paulino Font-Gilabert3, Andrew Healey3, Richard Hooper1, Moira J. Kelly1, Kristie-Marie Mammoliti5, Stefan Priebe1, Arvind Rajasekaran6, C. Michael Roberts7, Vickie Rowland8, Sally J. Singh9, Melanie Smuk10, Martin Underwood11,12, Sarah Waseem13, Patrick White8, Vari Wileman14 and Hilary Pinnock15

1Wolfson Institute of Population Health, Queen Mary University of London, London, UK. 2Chest Clinic, RVI Hospital, Newcastle upon Tyne NHS Foundation Trust, Newcastle upon Tyne, UK. 3Health Service and Population Research Department, Institute of Psychiatry, Psychology and Neuroscience, King’s College London, London, UK. 4NIHR Leicester Biomedical Research Centre – Respiratory, Glenfield Hospital, University Hospitals of Leicester NHS Trust, Leicester, UK. 5WHO Collaborating Centre on Global Women’s Health, Institute of Metabolism and Systems Research, University of Birmingham, Birmingham, UK. 6Department of Respiratory Medicine, Sandwell and West Birmingham Hospitals NHS Trust, Birmingham, UK. 7Centre for Digital Transformation of Health, University of Melbourne, Melbourne, Australia. 8Department of Population Health, School of Life Course and Population Sciences, King’s College London, London, UK. 9Department of Respiratory Sciences, Department of Health Sciences, University of Leicester, Leicester, UK. 10Blizard Institute, Queen Mary University of London, London, UK. 11Warwick Clinical Trials Unit, University of Warwick, Coventry, UK. 12University Hospitals of Coventry and Warwickshire, Coventry, UK. 13Women’s Health Division, University College Hospital, London, UK. 14Health Psychology, School of Mental Health and Psychological Sciences, Institute of Psychiatry, Psychology and Neuroscience, King’s College London, London, UK. 15Allergy and Respiratory Research Group, Usher Institute, The University of Edinburgh, Edinburgh, UK. 16Joint first authors.

Corresponding author: Stephanie J.C. Taylor (s.j.c.taylor@qmul.ac.uk)

Shareable abstract (@ERSpublications)
The TANDEM trial reports no benefit from a cognitive behavioural approach intervention focused particularly on breathlessness in people with advanced COPD and anxiety/depression. More research is needed for these patients with high levels of unmet need. https://bit.ly/3QDCB8v


This extracted version can be shared freely online.

Abstract

Background The TANDEM multicentre, pragmatic, randomised controlled trial evaluated whether a tailored psychological intervention based on a cognitive behavioural approach for people with COPD and symptoms of anxiety and/or depression improved anxiety or depression compared with usual care (control).

Methods People with COPD and moderate to very severe airways obstruction and Hospital Anxiety and Depression Scale subscale scores indicating mild to moderate anxiety (HADS-A) and/or depression (HADS-D) were randomised 1.25:1 (242 intervention and 181 control). Respiratory health professionals delivered the intervention face-to-face over 6–8 weeks. Co-primary outcomes were HADS-A and HADS-D measured 6 months post-randomisation. Secondary outcomes at 6 and 12 months included: HADS-A and HADS-D (12 months), Beck Depression Inventory II, Beck Anxiety Inventory, St George’s Respiratory Questionnaire, social engagement, the EuroQol instrument five-level version (EQ-5D-5L), smoking status, completion of pulmonary rehabilitation, and health and social care resource use.

Results The intervention did not improve anxiety (HADS-A mean difference −0.60, 95% CI −1.40–0.21) or depression (HADS-D mean difference −0.66, 95% CI −1.39–0.07) at 6 months. The intervention did not improve any secondary outcomes at either time-point, nor did it influence completion of pulmonary rehabilitation or healthcare resource use. Deaths in the intervention arm (13/242; 5%) exceeded those in the control arm (3/181; 2%), but none were associated with the intervention. Health economic analysis found the intervention highly unlikely to be cost-effective.
Conclusion This trial has shown, beyond reasonable doubt, that this cognitive behavioural intervention delivered by trained and supervised respiratory health professionals does not improve psychological comorbidity in people with advanced COPD and depression or anxiety.