### Treatment of childhood anxiety disorder in the context of maternal anxiety disorder: a randomised controlled trial and economic analysis

Cathy Creswell,<sup>1\*</sup> Susan Cruddace,<sup>1</sup> Stephen Gerry,<sup>2</sup> Rachel Gitau,<sup>1</sup> Emma McIntosh,<sup>3</sup> Jill Mollison,<sup>4</sup> Lynne Murray,<sup>1,5</sup> Rosamund Shafran,<sup>6</sup> Alan Stein,<sup>7,8</sup> Mara Violato,<sup>9,10</sup> Merryn Voysey,<sup>4</sup> Lucy Willetts,<sup>11</sup> Nicola Williams,<sup>2</sup> Ly-Mee Yu<sup>4</sup> and Peter J Cooper<sup>1,5</sup>

- <sup>1</sup>School of Psychology and Clinical Language Sciences, University of Reading, Reading, UK
- <sup>2</sup>Centre for Statistics in Medicine, University of Oxford, Oxford, UK
- <sup>3</sup>Health Economics and Health Technology Assessment, Institute of Health and Wellbeing, University of Glasgow, Glasgow, UK
- <sup>4</sup>Nuffield Department of Primary Health Care Sciences, University of Oxford, Oxford, UK
- <sup>5</sup>Department of Psychology, Stellenbosch University, Stellenbosch, South Africa <sup>6</sup>Institute of Child Health, University College London, London, UK
- <sup>7</sup>Department of Psychiatry, University of Oxford, Oxford, UK
- <sup>8</sup>School of Public Health, University of Witwatersrand, Witwatersrand, South Africa
- <sup>9</sup>Health Economics Research Centre, University of Oxford, Oxford, UK
- <sup>10</sup>National Institute for Health Research Health Protection Research Unit in
- Gastrointestinal Infections, University of Oxford, Oxford, UK
- <sup>11</sup>Berkshire Healthcare NHS Foundation Trust, Reading, UK

### \*Corresponding author

**Declared competing interests of authors:** Cathy Creswell was supported by a Medical Research Council Clinician Scientist Fellowship (G0601874).

## Plain English summary

# Childhood anxiety disorder in the context of maternal anxiety disorder

Health Technology Assessment 2015; Vol. 19: No. 38 DOI: 10.3310/hta19380

NIHR Journals Library www.journalslibrary.nihr.ac.uk

## **Plain English summary**

A nxiety disorders are characterised by a level of fear and avoidance that interferes in day-to-day life. They are among the most common emotional difficulties experienced by children and present a risk for ongoing emotional difficulties in later life. A talking therapy called cognitive–behavioural therapy (CBT) is effective for the treatment of childhood anxiety disorders; however, if parents also have an anxiety disorder children often do not benefit as much as they should. We set out to establish whether or not supplementing CBT for the child (child cognitive–behavioural therapy; CCBT) with (i) CBT focused on maternal anxiety disorders, or (ii) an intervention focused on maternal parenting responses, would lead to better child treatment outcomes than CCBT alone.

A total of 211 children were randomly allocated to (i) CCBT and CBT for the maternal anxiety disorder (CCBT + maternal CBT); (ii) CCBT and an intervention focused on how the mother interacted with her child [CCBT + mother–child interaction (MCI)]; or (iii) CCBT alone.

In terms of children's anxiety disorder diagnoses, severity and symptoms, there was only limited evidence that supplementing individual CBT for children with anxiety disorders with either intervention significantly improved treatment outcomes. However, when the cost and relative benefits of treatment to the child were taken into account, the intervention focused on the MCI was good value for money compared with CCBT alone.

These findings suggest that, in the context of maternal anxiety disorders, adding treatment focused on how mothers respond to their child, but not treatment focused on maternal anxiety disorders, may be a cost-effective approach to treatment.

© Queen's Printer and Controller of HMSO 2015. This work was produced by Creswell *et al.* under the terms of a commissioning contract issued by the Secretary of State for Health. This issue may be freely reproduced for the purposes of private research and study and extracts (or indeed, the full report) may be included in professional journals provided that suitable acknowledgement is made and the reproduction is not associated with any form of advertising. Applications for commercial reproduction should be addressed to: NIHR Journals Library, National Institute for Health Research, Evaluation, Trials and Studies Coordinating Centre, Alpha House, University of Southampton Science Park, Southampton SO16 7NS, UK.

### **Health Technology Assessment**

ISSN 1366-5278 (Print)

ISSN 2046-4924 (Online)

Impact factor: 5.116

Health Technology Assessment is indexed in MEDLINE, CINAHL, EMBASE, The Cochrane Library and the ISI Science Citation Index and is assessed for inclusion in the Database of Abstracts of Reviews of Effects.

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics (COPE) (www.publicationethics.org/).

Editorial contact: nihredit@southampton.ac.uk

The full HTA archive is freely available to view online at www.journalslibrary.nihr.ac.uk/hta. Print-on-demand copies can be purchased from the report pages of the NIHR Journals Library website: www.journalslibrary.nihr.ac.uk

#### Criteria for inclusion in the Health Technology Assessment journal

Reports are published in *Health Technology Assessment* (HTA) if (1) they have resulted from work for the HTA programme or, originally commissioned by the Medical Research Council (MRC) and now managed by the Efficacy and Mechanism Evaluation programme which is funded by the MRC and NIHR, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

Reviews in *Health Technology Assessment* are termed 'systematic' when the account of the search appraisal and synthesis methods (to minimise biases and random errors) would, in theory, permit the replication of the review by others.

#### **HTA programme**

The HTA programme, part of the National Institute for Health Research (NIHR), was set up in 1993. It produces high-quality research information on the effectiveness, costs and broader impact of health technologies for those who use, manage and provide care in the NHS. 'Health technologies' are broadly defined as all interventions used to promote health, prevent and treat disease, and improve rehabilitation and long-term care.

The journal is indexed in NHS Evidence via its abstracts included in MEDLINE and its Technology Assessment Reports inform National Institute for Health and Care Excellence (NICE) guidance. HTA research is also an important source of evidence for National Screening Committee (NSC) policy decisions.

For more information about the HTA programme please visit the website: http://www.nets.nihr.ac.uk/programmes/hta

#### This report

This issue of *Health Technology Assessment* contains a project originally commissioned by the MRC but managed by the Efficacy and Mechanism Evaluation Programme. The EME programme was created as part of the National Institute for Health Research (NIHR) and the Medical Research Council (MRC) coordinated strategy for clinical trials. The EME programme is funded by the MRC and NIHR, with contributions from the CSO in Scotland and NISCHR in Wales and the HSC R&D, Public Health Agency in Northern Ireland. It is managed by the NIHR Evaluation, Trials and Studies Coordinating Centre (NETSCC) based at the University of Southampton.

The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from the material published in this report.

This report presents independent research funded by the National Institute for Health Research (NIHR). The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the NHS, the NIHR, the MRC, NETSCC, the HTA programme, the EME programme or the Department of Health. If there are verbatim quotations included in this publication the views and opinions expressed by the interviewees are those of the interviewees and do not necessarily reflect those of the authors, those of the NHS, the NIHR, NETSCC, the HTA programme, the EME programme, the EME programme or the Department of Health.

© Queen's Printer and Controller of HMSO 2015. This work was produced by Creswell *et al.* under the terms of a commissioning contract issued by the Secretary of State for Health. This issue may be freely reproduced for the purposes of private research and study and extracts (or indeed, the full report) may be included in professional journals provided that suitable acknowledgement is made and the reproduction is not associated with any form of advertising. Applications for commercial reproduction should be addressed to: NIHR Journals Library, National Institute for Health Research, Evaluation, Trials and Studies Coordinating Centre, Alpha House, University of Southampton Science Park, Southampton SO16 7NS, UK.

Published by the NIHR Journals Library (www.journalslibrary.nihr.ac.uk), produced by Prepress Projects Ltd, Perth, Scotland (www.prepress-projects.co.uk).

# Editor-in-Chief of *Health Technology Assessment* and NIHR Journals Library

Professor Tom Walley Director, NIHR Evaluation, Trials and Studies and Director of the HTA Programme, UK

### **NIHR Journals Library Editors**

**Professor Ken Stein** Chair of HTA Editorial Board and Professor of Public Health, University of Exeter Medical School, UK

Professor Andree Le May Chair of NIHR Journals Library Editorial Group (EME, HS&DR, PGfAR, PHR journals)

Dr Martin Ashton-Key Consultant in Public Health Medicine/Consultant Advisor, NETSCC, UK

**Professor Matthias Beck** Chair in Public Sector Management and Subject Leader (Management Group), Queen's University Management School, Queen's University Belfast, UK

**Professor Aileen Clarke** Professor of Public Health and Health Services Research, Warwick Medical School, University of Warwick, UK

Dr Tessa Crilly Director, Crystal Blue Consulting Ltd, UK

Dr Peter Davidson Director of NETSCC, HTA, UK

Ms Tara Lamont Scientific Advisor, NETSCC, UK

**Professor Elaine McColl** Director, Newcastle Clinical Trials Unit, Institute of Health and Society, Newcastle University, UK

Professor William McGuire Professor of Child Health, Hull York Medical School, University of York, UK

Professor Geoffrey Meads Professor of Health Sciences Research, Faculty of Education, University of Winchester, UK

Professor John Powell Consultant Clinical Adviser, National Institute for Health and Care Excellence (NICE), UK

**Professor James Raftery** Professor of Health Technology Assessment, Wessex Institute, Faculty of Medicine, University of Southampton, UK

Dr Rob Riemsma Reviews Manager, Kleijnen Systematic Reviews Ltd, UK

Professor Helen Roberts Professor of Child Health Research, UCL Institute of Child Health, UK

**Professor Helen Snooks** Professor of Health Services Research, Institute of Life Science, College of Medicine, Swansea University, UK

Please visit the website for a list of members of the NIHR Journals Library Board: www.journalslibrary.nihr.ac.uk/about/editors

Editorial contact: nihredit@southampton.ac.uk