Sensory integration therapy for children with autism and sensory processing difficulties: the SenITA RCT

Elizabeth Randell,^{1*} Melissa Wright,¹
Sarah Milosevic,¹ David Gillespie,¹
Lucy Brookes-Howell,¹ Monica Busse-Morris,¹
Richard Hastings,² Wakunyambo Maboshe,¹
Rhys Williams-Thomas,¹ Laura Mills,¹ Renee Romeo,³
Nahel Yaziji,³ Anne Marie McKigney,⁴ Alka Ahuja,⁴
Gemma Warren, Eleni Glarou,^{1,5} Sue Delport^{6†}
and Rachel McNamara^{1†}

Declared competing interests of authors: David Gillespie was an associate member of the National Institute for Health and Care Research (NIHR) Health Technology Assessment (HTA) General Committee (2019 to September 2021) and is a member of the NIHR HTA Commissioning Committee (September 2021 to present).

Disclaimer: This report contains transcripts of interviews conducted in the course of the research and contains language that may offend some readers.

Published June 2022 DOI: 10.3310/TQGE0020

¹Centre for Trials Research, Cardiff University, Cardiff, UK

²Centre for Educational Development, Appraisal, and Research (CEDAR) University of Warwick, Coventry, UK

³Institute of Psychiatry Psychology and Neuroscience, King's College London, London, UK

⁴Aneurin Bevan University Health Board, Newport, UK

⁵Division of Population Medicine, School of Medicine, Cardiff University, Cardiff, UK

⁶School of Healthcare Sciences, Cardiff University, Cardiff, UK

^{*}Lead and corresponding author RandellE@cardiff.ac.uk †Joint last/senior author

Plain English summary

SenITA randomised controlled trial Health Technology Assessment 2022; Vol. 26: No. 29 DOI: 10.3310/TQGE0020

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

Plain English summary

Children with autism often experience problems with processing sensory information (e.g. noise, touch, movement, taste and sight), and this can lead to problems in daily life. This study was designed to see if sensory integration therapy can help children with these difficulties. Sensory integration therapy is a type of face-to-face play-based treatment that is delivered by occupational therapists. We compared sensory integration therapy with the type of treatment normally offered to children with autism (i.e. 'usual care'). We recruited children and their carers from Wales and England. Children could take part in the study if they had an autism diagnosis, had sensory processing difficulties and were in mainstream primary education. The children taking part in the study were randomly split into two groups. Sixty-nine children were given sensory integration therapy and 69 children carried on with their usual care. The sensory integration therapy involved 24 face-to-face sessions in an occupational therapy clinic, followed by two telephone calls with the carer. The sensory integration therapy lasted for 26 weeks. We collected information on the type of care being given to children in the usual-care group. Carers of each child were asked questions about their child's behaviour 6 and 12 months after starting the study. Some carers also completed an interview to talk about what it was like taking part in the study.

Therapists delivered the sensory integration therapy well. Carers and therapists said that they saw some improvements. However, sensory integration therapy was not significantly better than the usual care and is a more expensive option. We cannot say that sensory integration therapy is helpful for all children with autism and different sensory processing difficulties; however, it might be helpful for some children to focus on specific problems. Future work could focus on which children and problems it would help the most.

Health Technology Assessment

ISSN 1366-5278 (Print)

ISSN 2046-4924 (Online)

Impact factor: 4.014

Health Technology Assessment is indexed in MEDLINE, CINAHL, EMBASE, the Cochrane Library and Clarivate Analytics Science Citation Index.

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

Editorial contact: journals.library@nihr.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, 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

Health Technology Assessment (HTA) research is undertaken where some evidence already exists to show that a technology can be effective and this needs to be compared to the current standard intervention to see which works best. Research can evaluate any intervention used in the treatment, prevention or diagnosis of disease, provided the study outcomes lead to findings that have the potential to be of direct benefit to NHS patients. Technologies in this context mean any method used to promote health; prevent and treat disease; and improve rehabilitation or long-term care. They are not confined to new drugs and include any intervention used in the treatment, prevention or diagnosis of disease.

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.

This report

The research reported in this issue of the journal was funded by the HTA programme as project number 15/106/04. The contractual start date was in January 2017. The draft report began editorial review in June 2021 and was accepted for publication in March 2022. 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 material published in this report.

This report presents independent research funded by the National Institute for Health and Care 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 HTA programme or the Department of Health and Social Care. 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, the HTA programme or the Department of Health and Social Care.

Copyright © 2022 Randell *et al.* This work was produced by Randell *et al.* under the terms of a commissioning contract issued by the Secretary of State for Health and Social Care. This is an Open Access publication distributed under the terms of the Creative Commons Attribution CC BY 4.0 licence, which permits unrestricted use, distribution, reproduction and adaption in any medium and for any purpose provided that it is properly attributed. See: https://creativecommons.org/licenses/by/4.0/. For attribution the title, original author(s), the publication source – NIHR Journals Library, and the DOI of the publication must be cited.

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

NIHR Journals Library Editor-in-Chief

Professor Ken Stein Professor of Public Health, University of Exeter Medical School, UK

NIHR Journals Library Editors

Professor John Powell Consultant Clinical Adviser, National Institute for Health and Care Excellence (NICE), UK, and Professor of Digital Health Care, Nuffield Department of Primary Care Health Sciences, University of Oxford, UK

Professor Andrée Le May Chair of NIHR Journals Library Editorial Group (HSDR, PGfAR, PHR journals) and Editor-in-Chief of HSDR, PGfAR, PHR journals

Professor Matthias Beck Professor of Management, Cork University Business School, Department of Management and Marketing, University College Cork, Ireland

Dr Tessa Crilly Director, Crystal Blue Consulting Ltd, UK

Dr Eugenia Cronin Consultant in Public Health, Delta Public Health Consulting Ltd, UK

Dr Peter Davidson Interim Chair of HTA and EME Editorial Board. Consultant Advisor, Wessex Institute, University of Southampton, UK

Ms Tara Lamont Senior Adviser, Wessex Institute, University of Southampton, UK

Dr Catriona McDaid Reader in Trials, Department of Health Sciences, University of York, UK

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

Professor Geoffrey Meads Emeritus Professor of Wellbeing Research, University of Winchester, UK

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

Dr Rob Riemsma Consultant Advisor, School of Healthcare Enterprise and Innovation, University of Southampton, UK

Professor Helen Roberts Professor of Child Health Research, Child and Adolescent Mental Health, Palliative Care and Paediatrics Unit, Population Policy and Practice Programme, UCL Great Ormond Street Institute of Child Health, London, UK

Professor Jonathan Ross Professor of Sexual Health and HIV, University Hospital Birmingham, UK

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

Professor Ken Stein Professor of Public Health, University of Exeter Medical School, UK

Professor Jim Thornton Professor of Obstetrics and Gynaecology, Faculty of Medicine and Health Sciences, University of Nottingham, UK

Please visit the website for a list of editors: www.journalslibrary.nihr.ac.uk/about/editors

Editorial contact: journals.library@nihr.ac.uk