# Peer-led physical activity intervention for girls aged 13 to 14 years: PLAN-A cluster RCT

Russell Jago,<sup>1,2\*</sup> Byron Tibbitts,<sup>1</sup> Kathryn Willis,<sup>1</sup> Emily Sanderson,<sup>3,4</sup> Rebecca Kandiyali,<sup>3</sup> Tom Reid,<sup>1</sup> Stephanie MacNeill,<sup>3,4</sup> Ruth Kipping,<sup>3</sup> Rona Campbell,<sup>3</sup> Simon J Sebire<sup>1</sup> and William Hollingworth<sup>3</sup>

Declared competing interests of authors: All authors' time conducting this research was partially or fully funded by the National Institute for Health Research (NIHR) Public Health Research (PHR) programme. Sport England (London, UK) funded the intervention costs, but none of the authors has an independent relationship with Sport England. Russell Jago reports funding (to his institution) from NIHR PHR and NIHR Applied Research Collaboration (ARC) West for time on other grants and reports membership of the NIHR PHR Funding/Prioritisation Group (2015-21). Stephanie MacNeill reports membership of the Health Technology Assessment (HTA) General Committee (2020-present). Emily Sanderson reports funding (to her institution) from NIHR PHR for time on other grants. Rona Campbell reports funding (to her institution) from NIHR PHR for time on other grants and reports membership of the PHR Research Funding Board (2020-present). Simon J Sebire is the director of the Health Improvement Commission for Guernsey and Alderney LBG (Guernsey, UK) (2018-present) and is a non-political and third-sector representative for the advisory group of the Jersey Sustainable Well-being Political Oversight Group (2020-present). Ruth Kipping reports funding (to her institution) from NIHR PHR for time on other grants. William Hollingworth reports funding (to his institution) from NIHR PHR for time on other grants and is a member of the NIHR HTA Funding Committee Clinical Evaluation and Trials (2016-21).

Published March 2022 DOI: 10.3310/ZJQW2587

<sup>&</sup>lt;sup>1</sup>Centre for Exercise, Nutrition and Health Sciences, School for Policy Studies, University of Bristol, Bristol, UK

<sup>&</sup>lt;sup>2</sup>National Institute for Health Research Applied Research Collaboration West at University Hospitals Bristol NHS Foundation Trust, Bristol, UK

<sup>&</sup>lt;sup>3</sup>School of Social and Community Medicine, University of Bristol, Bristol, UK

<sup>&</sup>lt;sup>4</sup>Bristol Randomised Trials Collaboration, Bristol Trials Centre, University of Bristol, Bristol, UK

<sup>\*</sup>Corresponding author russ.jago@bristol.ac.uk

## **Plain English summary**

**PLAN-A cluster RCT** 

Public Health Research 2022; Vol. 10: No. 6

DOI: 10.3310/ZJQW2587

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

### **Plain English summary**

ew adolescent girls meet government physical activity recommendations, and physical activity levels decrease with age, which can lead to poor health. The Peer-Led physical Activity iNtervention for Adolescent girls (PLAN-A) aimed to empower influential Year 9 girls with the knowledge and skills to encourage their friends to be more physically active. These influential girls, nominated by other girls in the year, were called peer supporters. This trial explored whether or not Year 9 girls in the 10 schools that received PLAN-A became more physically active than those in the 10 schools that did not.

In total, 1558 Year 9 girls from 20 schools in south-west England participated. Girls in all schools wore an activity monitor for 7 days and completed questionnaires about their quality of life and feelings about physical activity. The baseline measures for all schools were collected during the winter of Year 9. Ten schools were then selected by chance to receive the intervention. Seven freelance female trainers were trained to deliver peer supporter training sessions to the nominated peer supporters (an average of 16 girls per school) in the intervention schools. These sessions promoted confidence, developed communication skills and provided the girls with strategies for encouraging their peers to be physically active in subtle ways. Peer supporters were then encouraged to promote physical activity among their friends for a 10-week period in the summer of Year 9. At 1 year after baseline measurements, physical activity and self-esteem measurement were repeated and differences between the groups analysed.

The cost of delivering PLAN-A was recorded to determine whether or not PLAN-A was cost-effective. The research team also spoke to Year 9 girls, school staff and trainers to explore their experiences of the intervention and identify factors that may have affected how the intervention worked.

There was no evidence that PLAN-A increased physical activity levels in participating girls. PLAN-A was shown to cost £2817 per school to deliver, on average, or £31 per Year 9 girl, and was, therefore, not cost-effective.

#### **Public Health Research**

ISSN 2050-4381 (Print)

ISSN 2050-439X (Online)

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 PHR archive is freely available to view online at www.journalslibrary.nihr.ac.uk/phr. 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 Public Health Research journal

Reports are published in *Public Health Research* (PHR) if (1) they have resulted from work for the PHR programme, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

Reviews in *Public Health Research* 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.

#### PHR programme

The Public Health Research (PHR) programme, part of the National Institute for Health Research (NIHR), is the leading UK funder of public health research, evaluating public health interventions, providing new knowledge on the benefits, costs, acceptability and wider impacts of non-NHS interventions intended to improve the health of the public and reduce inequalities in health. The scope of the programme is multi-disciplinary and broad, covering a range of interventions that improve public health.

For more information about the PHR programme please visit the website: https://www.nihr.ac.uk/explore-nihr/funding-programmes/public-health-research.htm

#### This report

The research reported in this issue of the journal was funded by the PHR programme as project number 17/50/01. The contractual start date was in July 2018. The final report began editorial review in March 2021 and was accepted for publication in October 2021. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The PHR editors and production house have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the final report 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 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, NETSCC, the PHR 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, NETSCC, the PHR programme or the Department of Health and Social Care.

Copyright © 2022 Jago *et al.* This work was produced by Jago *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** Chair of HTA and EME Editorial Board and Editor-in-Chief of HTA and EME journals. 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 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 Reviews Manager, Kleijnen Systematic Reviews Ltd, 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