

# Supporting Physical Activity through Co-production in people with Severe Mental Illness (SPACES): a pragmatic randomised controlled trial

<b>Submission date</b> 25/07/2024	<b>Recruitment status</b> Recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 07/08/2024	<b>Overall study status</b> Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 29/05/2026	<b>Condition category</b> Mental and Behavioural Disorders	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Life expectancy is reduced by around 15 - 20 years for people with severe mental ill health (SMI) compared to people without SMI, and this gap is increasing. The majority of these early deaths are due to physical health problems, which are partly preventable and which are related to factors including health behaviours such as diet, smoking and physical activity. Increasing physical activity can improve physical health in everyone and The World Health Organization has said that encouraging people to be more active can be as beneficial as quitting smoking. People with SMI are less physically active than the general population. Supporting people with SMI to increase their levels of physical activity could help to reduce the life expectancy gap.

Therefore, there is a need to establish whether a physical activity programme (intervention) that is relevant to the needs of people with SMI, is practical, acceptable and useful for people with SMI.

In this study, we will explore the clinical effectiveness and cost effectiveness of a physical activity intervention we have co-designed for people living with severe mental ill health.

### Who can participate?

People aged 18 years and over who have a diagnosis of schizophrenia, schizoaffective disorder or bipolar disorder.

### What does the study involve?

People who agree to take part in the study will be randomly allocated to usual care, or to the physical activity intervention plus usual care. We will collect information about participants level of physical activity at the outset of the trial and at 3, 6 and 12 months to establish whether the intervention is effective at increasing the amount of physical activity performed by people with SMI. We will also examine the impact of the intervention on other outcomes relating to mental health and quality of life.

What are the possible benefits and risks of participation?  
This is considered a low-risk research study.  
Participants may enjoy and value contributing to research.  
Participants who are randomised into the intervention plus usual care group may experience benefits from the potential increase in physical activity and reduced sedentary behaviour.

Where is the study run from?  
Sheffield Health & Social Care NHS Foundation Trust (UK)

When is the study starting and how long is it expected to run for?  
From January 2024 to March 2028

Who is funding the study?  
National Institute for Health and Care Research (UK)

Who is the main contact?  
Dr Emily Peckham (Chief Investigator), e.peckham@bangor.ac.uk

## Contact information

### Type(s)

Public, Scientific, Principal investigator

### Contact name

Dr Emily Peckham

### ORCID ID

<https://orcid.org/0000-0002-9377-1968>

### Contact details

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## Additional identifiers

Integrated Research Application System (IRAS)  
338802

Central Portfolio Management System (CPMS)  
62060

## Study information

Scientific Title

Supporting Physical Activity through Co-production in people with Severe Mental Illness (SPACES): a pragmatic randomised controlled trial of a bespoke intervention to increase levels of physical activity in people with SMI compared to usual care

### **Acronym**

SPACES full scale RCT

### **Study objectives**

A bespoke physical activity intervention is more effective at increasing levels of physical activity in people with severe mental illness than usual care

### **Ethics approval required**

Ethics approval required

### **Ethics approval(s)**

approved 14/05/2024, West of Scotland REC5 (West of Scotland Research Ethics Service, Ward 11, Dykebar Hospital, Grahamston Road, PAISLEY, PA2 7DE, United Kingdom; +44 141 314 0213; WoSREC5@ggc.scot.nhs.uk), ref: 24/WS/0040

### **Study design**

Multi-center pragmatic randomized controlled trial

### **Primary study design**

Interventional

### **Study type(s)**

Prevention, Quality of life

### **Health condition(s) or problem(s) studied**

Increase in physical activity in people with severe mental illness

### **Interventions**

Control and intervention groups: Both groups will receive usual care.

Intervention group only: The intervention comprises of two core components, weekly group-based sessions and one-to-one sessions with the physical activity coordinator. All participants allocated to the intervention, will be offered up to 18 weekly group-based sessions and up to 10 one-to-one sessions delivered by a trained physical activity coordinator.

The weekly group-based session will be up to two hours in length and include three components (up to 60 minutes of physical activity, a 30-minute themed discussion and 30 minutes of social time). The physical activity component will be made up of either an outdoor walk, an indoor circuit style activity graded to the needs of the participants (e.g., resistance exercises, balance exercises, cardiovascular exercises) or a community taster session (e.g., walking football, yoga). The themed discussions will involve informal information giving/sharing, which will cover relevant topics (e.g., getting started/keeping going with physical activity, benefits of increasing physical activity and reducing sedentary behaviour, overcoming barriers/hurdles to doing physical activity, being active in everyday life, staying motivated, keeping energised, exploring local indoor and outdoor activities). Time for informal socialising will make up the final portion of the weekly group-based session. The session will be delivered in a suitable NHS or community venue and run weekly for 18 weeks.

## Randomisation

Allocation will be through block randomisation (with random permuted blocks of various integer multiple of two size) with a separate schedule for each combination of centre and diagnosis. There will be no additional stratification factors, beside centre, and diagnosis (Schizophrenia (F20 and subcodes) vs. Schizoaffective disorder (F25 and subcodes) vs. Other psychotic and delusional disorders (not of known organic origin) (F21 – F24 and F26 – F29 and subcodes) vs. Bipolar disorder and manic episodes (F30 and F31, and subcodes)) in the randomisation sequence. The study statistician in Sheffield CTRU will generate the randomisation schedule prior to the start of the study using its own web-based in-house CTRU (SCRAM) randomisation system.

## Intervention Type

Behavioural

## Primary outcome(s)

Objective accelerometer-derived minutes per day of Moderate to Vigorous Physical Activity (MVPA) measured at 6-months post randomisation

## Key secondary outcome(s)

Current secondary outcomes as of 29/05/2026:

1. Data on physical activity (light physical activity and MVPA) and sedentary behaviour will be collected by wrist worn accelerometers at baseline, 3, 6 and 12 months post randomisation
2. The Simple Physical Activity Questionnaire (SIMPAQ) will be used to measure self-reported physical activity and sedentary behaviour at baseline, 3, 6 and 12 months post randomisation

Other secondary outcomes measured at 3, 6 and 12 months:

3. Body mass index (kg/m<sup>2</sup>)
4. Depression (PHQ-9)
5. Anxiety (GAD-7)
6. Loneliness (UCLA-3 item)
7. Health-related quality of life (EQ5D, REQoL)
8. Healthcare resource use and predictive behavioural questionnaire

Health risk behaviours (smoking and diet) will be collected at baseline

Previous secondary outcomes:

1. Data on physical activity (light physical activity and MVPA) and sedentary behaviour will be collected by wrist worn accelerometers at baseline, 3, 6 and 12 months post randomisation
2. The Simple Physical Activity Questionnaire (SIMPAQ) will be used to measure self-reported physical activity and sedentary behaviour at baseline, 3, 6 and 12 months post randomisation

Other secondary outcomes measured at 3, 6 and 12 months:

3. Health behaviours (diet and smoking)
4. Body mass index (kg/m<sup>2</sup>)
5. Depression (PHQ-9)
6. Anxiety (GAD-7)
7. Loneliness (UCLA-3 item)
8. Health-related quality of life (EQ5D, REQoL)
9. Healthcare resource use and predictive behavioural questionnaire

## Completion date

31/03/2028

## Eligibility

### Key inclusion criteria

1. Aged 18 years or older
2. ICD-10 or DSM-V diagnosis of SMI as documented in GP or psychiatric notes (schizophrenia (F20 and subcodes); schizoaffective disorder (F25 and subcodes); other psychotic and delusional disorders (not of organic origin) (F21-F24 and F26-F29 and subcodes); bipolar and manic episodes (F30 and F31 and subcodes)).
3. Are able to walk unaided
4. Willing to wear an accelerometer

### Participant type(s)

Patient, Service user

### Healthy volunteers allowed

No

### Age group

Mixed

### Lower age limit

18 years

### Upper age limit

100 years

### Sex

All

### Total final enrolment

0

### Key exclusion criteria

1. People who lack capacity to participate
2. Primary diagnosis of drug or alcohol abuse
3. Medical contraindication of physical activity as ascertained by GP or mental health team
4. Already physically active, defined as >300 minutes/week of self-reported moderate-to-vigorous physical activity (MVPA)
5. Non-English speakers
6. People who took part in the feasibility study

### Date of first enrolment

01/09/2024

### Date of final enrolment

28/02/2027

## Locations

**Countries of recruitment**

United Kingdom

England

**Study participating centre**

**Sheffield Health and Social Care NHS Foundation Trust**

Centre Court, Atlas Way

Sheffield

England

S4 7QQ

**Study participating centre**

**Tees, Esk and Wear Valleys NHS Foundation Trust**

Trust Headquarters

West Park Hospital

Edward Pease Way

Darlington

England

DL2 2TS

**Study participating centre**

**Leeds and York Partnership NHS Foundation Trust**

2150 Century Way

Thorpe Park

Leeds

England

LS15 8ZB

**Study participating centre**

**South London and Maudsley NHS Foundation Trust**

Bethlem Royal Hospital

Monks Orchard Road

Beckenham

England

BR3 3BX

**Study participating centre**

**Kent and Medway NHS and Social Care Partnership Trust**

Farm Villa

Hermitage Lane

Maidstone  
England  
ME16 9PH

**Study participating centre**

**South West Yorkshire Partnership NHS Foundation Trust**

Trust Headquarters  
Fieldhead Hospital  
Ouchthorpe Lane  
Wakefield  
England  
WF1 3SP

**Study participating centre**

**Devon Partnership NHS Trust**

Wonford House  
Dryden Road  
Exeter  
England  
EX2 5AF

**Study participating centre**

**Lincolnshire Partnership NHS Foundation Trust Hq**

NHS Foundation Trust  
Carholme Court  
Long Leys Road  
Lincoln  
England  
LN1 1FS

**Study participating centre**

**Cumbria, Northumberland, Tyne and Wear NHS Foundation Trust**

St Nicholas Hospital  
Jubilee Road  
Gosforth  
Newcastle upon Tyne  
England  
NE3 3XT

**Study participating centre**

**Surrey and Borders Partnership NHS Trust Hq**  
18 Mole Business Park  
Randalls Road  
Leatherhead  
England  
KT22 7AD

**Study participating centre**  
**Betsi Cadwaladr University Lhb Mold Office**  
Preswylfa  
Hendy Road  
Mold  
Wales  
CH7 1PZ

**Study participating centre**  
**Coventry and Warwickshire Partnership NHS Trust**  
Wayside House  
Wilsons Lane  
Coventry  
England  
CV6 6NY

**Study participating centre**  
**Pennine Care NHS Trust**  
225 Old Street  
Ashton-under-lyne  
England  
OL6 7SR

## **Sponsor information**

**Organisation**  
Sheffield Health and Social Care NHS Foundation Trust

**ROR**  
<https://ror.org/05cn4v910>

## **Funder(s)**

**Funder type**

Government

**Funder Name**

National Institute for Health and Care Research

**Alternative Name(s)**

National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

**Funding Body Type**

Government organisation

**Funding Body Subtype**

National government

**Location**

United Kingdom

## Results and Publications

**Individual participant data (IPD) sharing plan**

The datasets generated during and/ or analysed during the current study will be available on request from Emily Peckham email: e.peckham@bangor.ac.uk

**IPD sharing plan summary**

Available on request

**Study outputs**

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Study website</a>	Study website	11/11/2025	11/11/2025	No	Yes