Secure Care Hospital Evaluation of Manualised (interpersonal) Art-psychotherapy: A Randomised Controlled Trial - SCHEMA

PROTOCOL V1.3, 22.11.2022

Sponsor:	**Cumbria, Northumberland, Tyne and Wear NHS Foundation Trust (CNTW)** **St. Nicholas Hospital Jubilee Road** **Newcastle upon Tyne,** **NE3 3XT**
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SIGNATURE PAGE

The undersigned confirm that the following protocol has been agreed and accepted and that the Chief Investigator agrees to conduct the trial in compliance with the approved protocol and will adhere to the principles outlined in the relevant trial regulations, GCP guidelines, and CTR's SOPs.

I agree to ensure that the confidential information contained in this document will not be used for any other purpose other than the evaluation or conduct of the clinical investigation without the prior written consent of the Sponsor

I also confirm that I will make the findings of the trial publicly available through publication or other dissemination tools without any unnecessary delay and that an honest accurate and transparent account of the trial will be given; and that any discrepancies from the trial as planned in this protocol will be explained.

Trial Sponsor:			
Cumbria, Northumberland, Tyne & Wear NHS Foundation Trust			
Name	**Position**	**Signature**	**Date**

Chief Investigator:		
Simon Hackett		
Name	**Signature**	**Date**

General Information This protocol describes the SCHEMA clinical trial and provides information about the procedures for entering participants into the trial. The protocol should not be used as a guide, or as an aide-memoire for the treatment of other participants. Every care has been taken in drafting this protocol; however, corrections or amendments may be necessary. These will be circulated to the known Investigators in the trial.

Contact details – Chief Investigator

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Trial Co-ordination:

The SCHEMA trial is being coordinated by the Centre for Trials Research (CTR), Cardiff University, a Clinical Research Collaboration (UKCRC) registered trials unit.

This protocol has been developed by the SCHEMA Trial Management Group (TMG).

For **all queries** please contact the SCHEMA team through the main trial email address. Any clinical queries will be directed through the Trial Manager to either the Chief Investigator or a Co-Investigators.

Main Trial Email:	schema@cardiff.ac.uk	
Trial Manager:	Dr Paula Foscarini-Craggs	Email: schema@Cardiff.ac.uk
Data Manager:	Waku Maboshe	
Trial Statistician:	Muhammad Riaz	

Randomisations:

Randomisation

<<INSERT WEB ADDRESS>>

(See section 9.5 for more details).

Serious Adverse Events:

Clinical queries and SAE Reporting

Schema@cardiff.ac.uk

All clinical queries will be directed to the most appropriate clinical person.

Table of Contents

Glossary of abbreviations

AE	Adverse Event
A&E	Accident and Emergency
AR	Adverse Reaction
CA	Competent Authority
CF	Consent Form
CI	Chief Investigator
CNTW	Cumbria, Northumberland, Tyne and Wear
CRF	Case Report Form
CRO	Contract Research Organisation
CTA	Clinical Trials Authorisation
CTIMP	Clinical Trial of Investigational Medicinal Product
CTR	Centre for Trials Research
CTU	Clinical Trials Unit
CU	Cardiff University
DPA	Data Protection Act
EUCTD	European Union Clinical Trials Directive
GAfREC	Governance Arrangements for NHS Research Ethics Committees
GCP	Good Clinical Practice
GP	General Practitioner
HB	Health Board
HE	Health Economics
HTA	Health Technology Assessment
HONOS-WAA	Health of the Nation Outcome Scale Working Age Adult
HONOS-LD	Health of the Nation Outcome Scale Learning Disability
IC	Informed consent
ICH	International Conference on Harmonization
ID	Intellectual Disability
IDMC	Independent Data Monitoring Committee
IEC	Independent Ethics Committee
ISF	Investigator Site File
ISRCTN	International Standard Randomised Controlled Trial Number

IU	International Unit
NCT	National Clinical Trial
NHS	National Health Service
NICE	National Institute for Clinical Excellence
NLI	No Local Investigator
NPSA	National Participant Safety Agency
NRR	National Research Register
PCT	Primary Care Trust
PI	Principal Investigator
PIAG	Participant Information Advisory Group
PIC	Participant Identification Centre
PIS	Participant Information Sheet
QA	Quality Assurance
QALY	Quality-adjusted Life Years
QAP	Qualitative Analysis Plan
QC	Quality control
QL (QoL)	Quality of Life
R&D	Research and Development
RCT	Randomised Controlled Trial
REC	Research Ethics Committee
RGF	Research Governance Framework for Health and Social Care
ReQoL	Recovering Quality of Life 10-item version
SAE	Serious Adverse Event
SAP	Statistical Analysis Plan
SOP	Standard Operating Procedure
SSA	Site Specific Assessment
TMF	Trial Master File
TMG	Trial Management Group
TSC	Trial Steering Committee
UC	Usual care

Amendment History

The following amendments and/or administrative changes have been made to this protocol since the implementation of the first approved version.

Amendment No.	Protocol version no.	Date issued	Summary of changes made since previous version
1	1.1	02/11/2022	Clarified that original consent form is kept in ISF Clarified that recording of therapy sessions is optional Correct dates for GDPR Updated that SAE will be reported until of trial Corrected retention period.
2	1.2	09/11/2022	Clarified archiving procedures
3	1.3	22/11/2022	amended trial synopsis so it matches main text Added information on taking therapist consent for process evaluation Added references

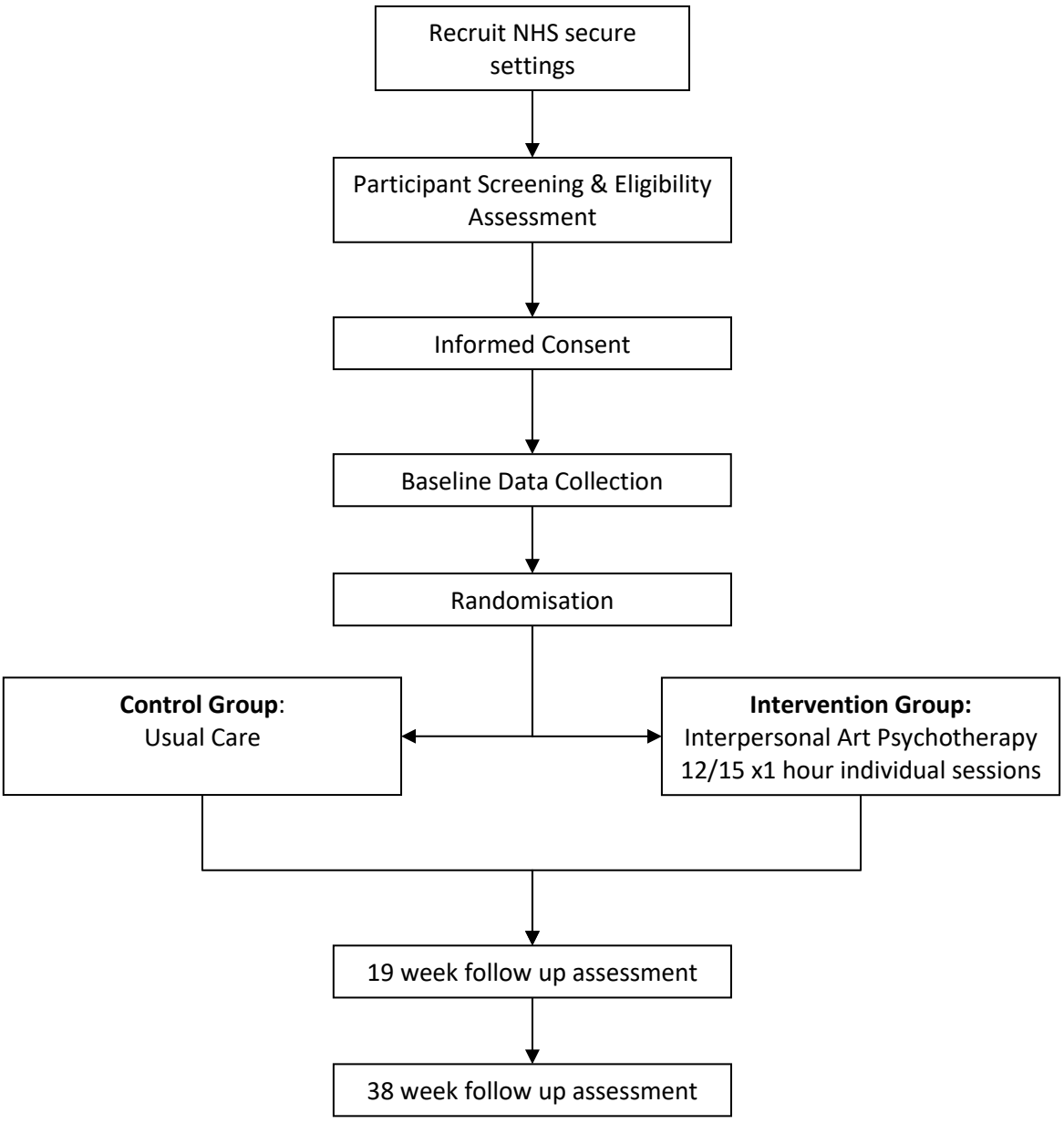
Synopsis

Short title	**SCHEMA** - **S**ecure **C**are **H**ospital **E**valuation of **M**anualised (interpersonal) **A**rt-psychotherapy: A Randomised Controlled Trial.
Acronym	**SCHEMA**
Internal ref. no.	
Development phase	Phase III
Funder and ref.	NIHR301264
Trial design	The RCT will utilise a parallel-group participant-randomised design. Participants will be allocated to interpersonal art psychotherapy and usual care (UC) or a UC delayed interpersonal art psychotherapy treatment control group after 38 weeks. Patient and Public Involvement and Engagement (PPIE) has informed the inclusion of a delayed treatment control group. The trial includes a process evaluation.
Trial participants	Adults with learning disabilities/borderline intellectual functioning who are inpatients in NHS secure care services.
Planned sample size	200 (100 per arm)
Planned number of sites	a minimum of 10 sites
Inclusion criteria	• An inpatient in an NHS secure hospital/unit/service with the presence of learning disability/borderline intellectual functioning (indicated by a Learning Disability Screening Questionnaire (LDSQ) score of 57 or below). • Age 18 to 60 years. • Able to give informed consent. • A HONOS (Health of the Nation Outcome Scale) score between 1 and 4 for item 1 (Overactive, aggressive, disruptive, or agitated behaviour / Behavioural problems directed at others). • The participants' involvement in the study is supported by their responsible clinician and/or multidisciplinary team (MDT).
Exclusion criteria	• Unable to give informed consent. • LDSQ Screening score >57. • A HONOS score of 0 for item 1. • Planned discharge within 12 months of the start of the study. • Receiving active assessment or treatment for acute or unstable/unmanaged psychotic symptoms including medication dose titration.
Treatment duration	12 to 15 weeks
Follow-up duration	38 weeks from randomisation
Planned trial period	January 2023 to January 2025

Primary objective	To assess the effectiveness of interpersonal art psychotherapy in adults in secure care compared to usual care.
Secondary objectives	• To estimate the cost-effectiveness of interpersonal art psychotherapy. • To explore patient characteristics and psychotherapeutic processes/mechanisms within interpersonal art psychotherapy that are influential to treatment. • To explore the longitudinal changes in aggressive behaviour after receiving art psychotherapy • To evaluate changes in patient distress related to psychiatric symptoms
Primary outcomes	Frequency/severity of aggressive incidents at 38 weeks (baseline, 19 weeks treatment plus 23 weeks for follow-up) measured by the MOAS. The MOAS is an observer-rated measure of frequency and severity of aggression (< 10 or > 10 observations over 7 days), (intra-class correlation coefficient (ICC) of 0.93).
Secondary outcomes	1. Cost-effectiveness of art psychotherapy will be based on the EuroQoL EQ5D-3L and Recovering Quality of Life 10-item version (ReQoL-10), assessment of service use (i.e. GP appointments, A&E attendance, medication) and frequency of risk incidences (i.e. approved restraint techniques, seclusion, rapid tranquilising medication, incidents of self-harm). These will be assessed at 19 weeks and 38 weeks post-randomisation. 2. Psychotherapy processes will be evaluated through observer-analysis of transcribed audio-recorded therapy sessions using the Working Alliance Inventory-Observer Ratings Scale (WAI-O) and Psychotherapy Process Q-set (PQS), as well as linguistic analysis of change in patients' use of anger-related words and relational words/pronouns, using LIWC). 3. Longitudinal changes in aggressive behaviour will be assessed weekly between week 19 and week 38 post-randomisation using the MOAS. 4. Patient distress attributed to psychiatric symptoms as measured by the Brief Symptom Inventory (BSI) Positive Symptom Distress Index (PSDI) (50) assessed at 19 weeks and 38 weeks post-randomisation.
Intervention	Interpersonal art psychotherapy is a manualised intervention delivered by a trained Health and Care Professions Council (HCPC) registered art psychotherapist. 12 to 15 1-hour individual sessions. Topic session schedule components: sessions 1 to 3 personal goals, coping responses and self-management; 4 to 5 relationships; 6 to 8 life events; 9 to 10 interpersonal themes; 11 to 12 imagined future and final review (up to +3 additional sessions can be added at any time point for personalised support and reasonable adjustments required for a participant's specific communication/learning and/or therapeutic needs).

2 Trial summary & schema

2.1 Participant flow diagram



2.2 Trial lay summary

We want to find out if interpersonal art psychotherapy is helpful and value for money for people in secure care with learning disabilities or who have difficulties learning. We will be testing if interpersonal art psychotherapy works better than the usual care that is being provided. To do this we will need to recruit 200 people and put them into groups by chance, with half having interpersonal art psychotherapy and half on a waiting list for it. This is called a randomised controlled trial (RCT). Everyone in the study will get a chance to have interpersonal art psychotherapy.

The research team is made up of art psychotherapists and researchers. People who have a learning disability or who have difficulties learning have been advising us on how we should do this research. People helped us to design the study, suggesting using a waiting list. They thought it was important for everyone in the study to have a chance to do art psychotherapy. The therapy manual was developed by an art psychotherapist and people who have a learning disability or who have difficulties learning looked at it and told us what they thought worked well and what could be improved. People with a learning disability or who have difficulties learning will be advising us during the study.

We will find out if interpersonal art psychotherapy can help people who are in secure care to improve their mood, become less distressed, and not hurt themselves or others. We think that this research will give people in secure care more choices about accessing psychotherapy.

Key Points

- Some people with learning disabilities or who have difficulties learning who commit a crime and go to court can be sent to prison or to a hospital with secure care.
- People with learning disabilities in secure care are more likely to stay there longer than people without a learning disability.
- Records show that people in secure care hurt either themselves or others more often than in other mental health hospitals.
- People who struggle with reading information and communication can find creative approaches a helpful way to understand and manage their own mental health needs.
- Art psychotherapy is a psychological therapy where people work with a therapist and make artwork to help them to communicate about any difficulties they are having and things they would like to feel better about. It can be helpful for people who find it hard to talk about what they are thinking about, feeling, or struggling with.

3 Background

What is the problem being addressed?

Aggression and violence are a cause of major problems in psychiatric and secure inpatient care. A systematic meta-analysis of violence in psychiatric settings (23,972 patients) reported that the proportion of patients who committed at least one act of violence was 17% (95% confidence interval (CI) 14–20%). Factors associated with higher rates of violence and aggression in inpatient psychiatric settings include higher proportions of male patients, involuntary (detained) patients, patients with a

diagnosis of schizophrenia, and patients with alcohol use disorder (1). Inpatient aggression and violence result in a wide range of health problems, such as:

- injury to patients and staff.
- counter therapeutic effects associated with violence and coercive management (i.e. seclusion, restraint, and enforced medication) described by patients as traumatic and triggering aggressive responses instead of engagement with treatment.
- emotional effects of exposure to physical violence on other inpatients contribute to poor mental health (i.e. anger, shock, fear, depression, anxiety and sleep disturbance).
- staff low morale, sick leave/high staff turnover (can trigger negative cycles with increased temporary staffing levels leading to more adverse incidents) (1).

An international review indicated that patients in secure care settings are likely to be more violent than those in other types of psychiatric units (2). In England, available figures (2015-17) reported 69% of assaults against NHS staff occurred in mental health or intellectual disability settings (3, 4). An interim report (2018) including data from 39 NHS mental health trusts reported 33,820 physical assaults against staff (2016/17) (5). Survey results from mental health and ID settings reported between 36.8% to 41.3% of nursing staff experienced physical abuse (5).

Why is this research important in terms of improving the health and wellbeing of the patients and healthcare?

The development of effective interventions for people in secure care with Intellectual disability (ID) and borderline intellectual functioning (BIF) is a priority. There is limited evidence for the effective use of psychotropic medication for the treatment of challenging behaviour, including aggression, in people with ID. This has been highlighted within the NHS England campaign 'Stopping over medication of people with a learning disability, autism or both (STOMP)'. Adaptations are required for psychological interventions for people who have ID/BIF and mental health problems (6) with specific recommendations for adult patients with ID and autistic spectrum disorders in secure care (7). There has been some progress in the adaptation of Cognitive Behavioural Therapy (CBT) for anger treatment in people with ID with an 'emerging evidence base'. However, a cluster randomised controlled trial of a manualised cognitive behavioural anger management intervention for people with ID (n=212) reported an impact on self-rated anger as equivocal (8). The most recent summary (2018) of research with offenders who have ID identified that 'the development of effective interventions for this vulnerable group is a priority' (9).

Review of the existing evidence

People with ID/BIF who are inpatients in NHS services and/or residential care are more likely to have reported aggression compared with people living independently (10). Sadly, there have been examples of staff abuse and provocation towards people with ID in residential care (11, 12). NHS England's attempts to reduce inpatient bed numbers have been criticised due to a lack of community service provision (13, 14). Studies of individuals with ID who live in a residential facility have shown that aggressive behaviour was often reinforced by social interactions (15) with task-

related events evoking aggressive behaviour most often (16, 17). Greater sensitivity to interpersonal situations contributed to aggression in some people with ID (18, 19). Both a tendency toward perceiving hostility in others and emotional arousal could be factors underpinning problems of aggression (20, 21). Personal experiences of conflict for people with ID may be contributory (22) including conflict with strangers or peers outside of their friendship groups (22, 23). The presence of a co-occurring mental illness can significantly increase the likelihood of people with ID having both victimisation and offending histories (24).

ID inpatient secure care

The health expenditure for ID secure care is estimated at over 300 million pounds sterling per annum (25). Patients with ID being treated on a secure care ward are more likely to stay in hospital for longer, >10 years in high secure, 5 years in medium secure or 15 years in a mix of high and medium secure settings, compared to patients on other types of secure mental health wards (26). There are three high secure hospitals in England providing just over 700 beds and around 60 medium secure units providing around 3500 medium secure beds, with nearly 35% of those beds provided by the independent sector (26, 27). There is an ongoing need to develop and test treatments and technologies in secure care to address the high rates of risk incidents, including self-harm, and to reduce rates of aggression and violence (28).

3.1 Rationale for current trial/Justification of Treatment Options

Evidence base for psychological interventions in secure care

The most recent systematic review (2019) of RCTs of psychological interventions offered to forensic/secure mental health inpatients (n=9 studies including 523 participants) reported that current practice is based on limited evidence with no consistent significant findings. The study sample sizes ranged from 14 to 112. A low risk of bias assessment indicated that good quality RCTs can be undertaken within inpatient medium to high secure forensic settings. No economic evaluations were conducted in the studies. The review concluded that further studies conducted within a standardised framework are needed to clarify the evidence base (29).

Art psychotherapy

Art psychotherapy (art therapy) is routinely used in NHS services to help children, young people, and adults with mental health difficulties (30, 31). A systematic review of the clinical efficacy of art therapy among people with non-psychotic mental health disorders (32) identified 15 randomised controlled trials (RCTs) (n=777). The report concluded that art therapy appeared to have statistically significant positive effects compared with controls. National practice-based guidelines have been developed for art therapy with people who have an ID (33). Initial findings from a systematic review identified limited evidence for group-based interventions with better outcomes being reported for individual therapy (34, 35).

The aim of this trial is to answer the following research question:

Does interpersonal art psychotherapy reduce (i) the frequency and severity of aggressive incidents and/or (ii) patient self-reported distress associated with psychiatric symptoms in adults within secure care who have borderline to mild/moderate ID compared to usual care

4 Trial objectives/endpoints and outcome measures

4.1 Primary objectives

To assess the effectiveness of interpersonal art psychotherapy in reducing the frequency and severity aggressive behaviour in adult secure care.

4.2 Secondary objectives

1. To determine if interpersonal art psychotherapy is more cost-effective compared to usual care.
2. To explore patient characteristics and psychotherapeutic processes/mechanisms within interpersonal art psychotherapy that are influential to treatment.
3. To explore the longitudinal changes in aggressive behaviour after receiving art psychotherapy.
4. Evaluate changes in patient distress relating to psychiatric symptoms

4.3 Primary outcomes measure(s)

The primary outcome is the frequency/severity of aggressive incidents as measured by the MOAS. The MOAS will be completed by healthcare staff at baseline, and then again at 19 weeks and 38 weeks post-randomisation. The primary outcome timepoint is at 38 weeks. The MOAS is an observer-rated measure of frequency and severity of aggression (< 10 or > 10 observations over 7 days), (intra-class correlation coefficient (ICC) of 0.93) (43).

4.4 Secondary outcomes measure(s)

The secondary outcome measures are as follows:

1. Cost-effectiveness of art psychotherapy will be based on the EuroQoL EQ5D-3L and Recovering Quality of Life 10-item version (ReQoL-10), assessment of service use (i.e. GP appointments, A&E attendance, medication) and frequency of risk incidences (i.e. approved restraint techniques, seclusion, rapid tranquilising medication, incidents of self-harm). These will be assessed at 19 weeks and 38 weeks post-randomisation.

2. Psychotherapy processes will be evaluated through observer-analysis of transcribed audio-recorded therapy sessions using the Working Alliance Inventory-Observer Ratings Scale (WAI-O) and Psychotherapy Process Q-set (PQS), as well as linguistic analysis of change in patients' use of anger-related words and relational words/pronouns, using LIWC).

3. Longitudinal changes in aggressive behaviour will be assessed weekly between week 19 and week 38 post-randomisation using the MOAS.

4. Patient distress attributed to psychiatric symptoms as measured by the Brief Symptom Inventory (BSI) Positive Symptom Distress Index (PSDI) (50) assessed at 19 weeks and 38 weeks post-randomisation.

5 Trial design and setting

This is a two-arm randomised controlled effectiveness trial comparing manualised interpersonal art psychotherapy and Usual Care (UC) to UC and delayed interpersonal art psychotherapy treatment control group (see participant flow diagram). The RCT will be conducted in a minimum of 10 NHS Trusts with secure care facilities and will recruit 200 participants. The trial design includes an integrated assessment of intervention effectiveness and cost-effectiveness. The total trial duration is 22 months with 12 months of recruitment. The end of the trial will be defined as the last participant, last visit.

Trial Monitoring

Progress will be monitored regularly throughout the life of the trial using a traffic light system. Traffic-light assessment will comprise of monitoring a proportion of target numbers of participants recruited and randomised into the study. If the traffic light assessment indicates a drop into the 'amber' range additional measures will be put into place to ensure the trial meets its objectives.

The targets will include:

(a) recruitment rates.
(b) adherence: proportion of randomised participants completing the intervention (completion of 5 out of 7 components of interpersonal art psychotherapy).
(c) successful follow-up: proportion of participants with data collection to 38 weeks.
(d) proportion withdrawing from the study (<20% loss to follow-up).
(e) Fidelity: proportion of therapist's adherence to the treatment manual (as measured on the Interpersonal Art Psychotherapy Treatment Fidelity Checklist).

	A. Recruitment	B. Adherence	C. Follow up	D. Withdrawal	e. Fidelity
Green	>80%	>80%	>80%	<20%	>80%
Amber	60-80%	60-80%	60-80%	20-40%	60-80%
Red	<60%	<60%	<60%	>40%	<60%

5.1 Risk assessment

A Trial Risk Assessment has been completed to identify the potential hazards associated with the trial and to assess the likelihood of those hazards occurring and resulting in harm. This risk assessment includes:

- The known and potential risks and benefits to human participants
- How high the risk is compared to normal standard practice?
- How the risk will be minimised/managed

This trial has been categorised as a low, where the level of risk is comparable to the risk of standard care. A copy of the trial risk assessment may be requested from the Trial Manager. The trial risk assessment is used to determine the intensity and focus of monitoring activity (see section 25.1).

6 Site and Investigator selection

This trial will be carried out at NHS Secure care services. All interested sites will be required to confirm that they have adequate resources and experience to conduct the trial.

Before any Site can begin recruitment a Principal Investigator at each site must be identified. The following documents must be in place and copies sent to the SCHEMA Trial email account (see contact details on page 4):

- The approval letter from the site's R&D Department
- Favourable opinion of host care organisation/main ethics committee
- A signed Trial Agreement
- Current signed and dated 2-page summary Curriculum Vitae and GCP training certificate of the Principal Investigator (PI)
- Completed Site Delegation Log and Roles and Responsibilities document
- Full contact details for all host care organisation personnel involved, indicating preferred contact
- A copy of the most recent approved version of the Participant Information Sheet(s) and Consent Form(s) on host care organisation headed paper
- Complete Trial Opening Checklist

Upon receipt of all the above documents, the Trial Manager will send written confirmation to the Principal Investigator/lead Research Nurse detailing that the centre is now ready to recruit participants into the trial. This letter/email must be filed in each site's Site File.

Occasionally during the trial, amendments may be made to the trial documentation listed above. CTR will issue the site with the latest version of the documents as soon as they become available. It is the responsibility of the CTR to ensure that they obtain local R&D approval for the new documents.

7 Participant selection

Participants are eligible for the trial if they meet the following inclusion criteria and none of the exclusion criteria apply. All queries about participant eligibility should be directed to the Trial Manager before randomisation/registration.

7.1 Inclusion criteria

- An inpatient in an NHS secure hospital/unit/service with the presence of learning disability/borderline intellectual functioning (indicated by a Learning Disability Screening Questionnaire (LDSQ) score of 57 or below).

- Age 18 to 60 years.
- Able to give informed consent.
- A HONOS (Health of the Nation Outcome Scale) score between 1 and 4 for item 1 (Overactive, aggressive, disruptive, or agitated behaviour / Behavioural problems directed at others).
- The participants' involvement in the study is supported by their responsible clinician and/or multidisciplinary team (MDT).

7.2 Exclusion criteria

- Unable to give informed consent.
- LDSQ Screening score >57.
- A HONOS score of 0 for item 1.
- Planned discharge within 12 months of the start of the study.
- Receiving active assessment or treatment for acute or unstable/unmanaged psychotic symptoms including medication dose titration.

8 Recruitment, Screening and registration

8.1 Participant identification

Screening, randomisation, and allocation.

Trial teams at site will screen participants, complete consent, and data collection. Clinical Studies Officers from the NIHR Portfolio research delivery team provide support to sites that have limited research staff and will also complete the primary outcome measure (MOAS assessed at 38 weeks post-randomisation). Potentially eligible participants will be identified through a variety of means. If available at a site, they will be encouraged to use the Clinical Record Interactive Search System. Randomisation will be overseen and administered via the CTR. Randomisation will be added to the database so that once baseline data is entered into the online database a participant is randomised and an automatic email notification is generated e.g. to a study-specific email account.

8.2 Screening logs

A screening log of all ineligible and eligible but not consented/not approached will be kept at each site so that any biases from differential recruitment will be detected. When at site, logs may contain identifiable information but this **must** be redacted prior to being sent to the CTR. The screening log should be sent to the SCHEMA trial email address every month (see section 19 for further detail on data monitoring/quality assurance).

8.3 Recruitment rates

A total of 200 (100 per arm) participants will be recruited at an expected rate of 2.5 participants per site per month

Routine monitoring of recruitment and retention will take place during the trial. A traffic light system will be implemented to assess key criteria. Monitoring information will be reviewed at the Trial Management Group (TMG).

8.4 Informed consent

Potential participants will have a range of impairments. No individual will be excluded on this basis, or due to other co-morbid conditions (other than the presence of untreated/unmanaged psychotic symptoms), provided all other inclusion criteria are met and exclusion criteria not met. Informed consent will be sought by suitably qualified, experienced and trained personnel in accordance with the GCP directive on taking consent and before any trial-related procedures are undertaken.

The participant's written informed consent must be obtained using the trial Consent Form, which follows the Participant Information Sheet. The participant should be given a minimum of 24 hours after the initial invitation to participate before being asked to sign the Consent Form. Informed consent must be obtained prior to the participant undergoing procedures that are specifically for the trial. Consent may be taken by a suitably trained member of the study team who is delegated to do so.

Please note, only when written informed consent has been obtained from the participant and they have been randomised/enrolled into the trial can they be considered a trial participant.

Participants should always be asked to sign a consent form. The original consent should be kept in the investigator site file. One scanned copy should be given to the participant but and a further scanned copy should be kept with the participant's hospital notes.

The right of the participant to refuse to participate in the trial without giving reasons must be respected. After the participant has entered the trial, the investigator must remain free to give alternative treatment to that specified in the protocol, at any stage, if he/she feels it to be in the best interest of the participant. However, the reason for doing so should be recorded and the participant will remain within the trial for the purpose of follow-up and data analysis according to the treatment option to which he/she has been allocated. Similarly, the participant must remain free to withdraw at any time from the protocol treatment without giving reasons and without prejudicing his/her further treatment. Consent should be continually re-assessed at each subsequent study visit.

Therapists will be asked to provide written informed consent to take part in interviews which will be analysed as part of a process evaluation. Therapist must be provided with the therapist information sheet and given sufficient time to review the information. Consent must be recorded on the therapist consent form. A decision to not participate in the interviews or to stop later withdraw consent should be respected.

8.5 Registration and Randomisation

8.5.1 Registration

Once a patient has been deemed eligible for entry into the trial, informed consent is obtained from the participant. The participant will be registered on the trial database and assigned a unique identification number.

8.5.2 Randomisation

Randomisation will be on a 1:1 ratio. Once baseline data is entered onto the trial database, randomisation will be triggered within the online system and an automatic email notification is generated e.g. to a study-specific email account. We will use randomly permuted blocks stratified by sex and a diagnosis of psychosis to achieve balance in group characteristics.

9 Withdrawal & lost to follow-up

9.1 Withdrawal

Participants have the right to withdraw consent for participation in any aspect of the trial at any time. The participants' care will not be affected at any time by declining to participate or withdrawing from the trial.

If a participant initially consents but subsequently withdraws from the trial, a clear distinction must be made as to what aspect of the trial the participant is withdrawing from. These aspects could be:

1. Withdrawal of Trial Treatment/ Intervention
2. Withdrawal from questionnaires
3. Withdrawal from follow-up assessments
4. Withdrawal of consent for therapy sessions to be audio recorded
5. Withdrawal of Consent to all of the above

The withdrawal of participant consent shall not affect the trial activities already carried out and the use of data collected prior to participant withdrawal. The use of the data collected prior to the withdrawal of consent is based on informed consent before its withdrawal.

Furthermore, it is important to collect safety data ongoing at the time of withdrawal, especially if the participant withdraws because of a safety event. There is specific guidance on this contained in the Participant Information Sheet but briefly: If a participant wishes to stop taking part in the trial completely, they may need to be seen one last time for an assessment.

A participant may withdraw or be withdrawn from the trial intervention for the following reasons:

- Withdrawal of consent for treatment by the participant
- Any alteration in the participant's condition which justifies the discontinuation of the intervention in the investigator's opinion
- Non-compliance

In all instances where a participant consents and subsequently withdraws, a withdrawal form should be completed on the participant's behalf by the researcher/clinician based on information provided by the participant. This withdrawal form should be sent to the trial team. Any queries relating to the potential withdrawal of a participant should be forwarded to the trial manager.

9.2 Lost to follow up

We will make every effort to reduce loss to follow up using the methods listed below:

1. A £15 'voucher will be offered at pre-, and post-assessment, and £20 at follow-up (total £50 per participant).
2. 2-week follow-up window to allow the greatest flexibility in completing follow-up appointments while still maintaining scientific rigour.
3. A minimum dataset will be established to decrease missing primary outcome data and reduce participant burden
4. Participant burden will be assessed and adapted if deemed too high.

10 Trial Intervention

10.1 Interpersonal art psychotherapy

Interpersonal art psychotherapy is a manualised intervention delivered by a trained Health and Care Professions Council (HCPC) registered art psychotherapist. Interpersonal art psychotherapy, specific instructions, detailed techniques and intervention delivery approach are described in a standardised therapist manual allowing replication. The intervention is delivered by an art psychotherapist who has completed interpersonal art psychotherapy manual training, treatment fidelity checks, and are receiving clinical supervision. The therapy is 12 to 15 1-hour individual sessions. Topic session schedule components: sessions 1 to 3 personal goals, coping responses and self-management; 4 to 5 relationships; 6 to 8 life events; 9 to 10 interpersonal themes; 11 to 12 imagined future and final review (up to +3 additional sessions can be added at any time point for personalised support and reasonable adjustments required for a participant's specific communication/leaning and/or therapeutic needs).

Treatment fidelity

Assessing treatment fidelity is important for multi-site studies to ensure that treatments are operationalised and monitored for differentiation, competency and adherence (46). Within the feasibility study rates of therapist adherence to the interpersonal art psychotherapy manual were 82.25% (42) and we will be seeking to achieve similar results in the trial. All sessions will be audio recorded and a random sample of 3 timepoints for 3 participants across 9 therapists (27% of sessions) will be blind rated using the interpersonal art psychotherapy checklist, incorporating tested methods for assessing treatment fidelity. Where participants consent to participating in the study but not to having intervention sessions audio-recorded, alternative ways to assess fidelity will be explored.

Comparator

Usual care (UC) within inpatient secure care involves assessment and treatment by specialist professionals. The MDT uses the Care Programme Approach (CPA) (7) to coordinate and plan care. MDTs comprise psychiatrists, clinical and forensic psychologists, mental health and ID nursing staff, and Allied Health Professionals (AHPs). MDTs conduct risk assessment/formulation and management, recovery-focused care and/or positive behaviour support (PBS) (7). Patients have access to psychotherapy/psycho-educational work and/or specific offence-related treatment and/or pharmacotherapy treatment.

We will identify specific characteristics of UC at the study sites using a standardised pro-forma checklist and will use the TIDieR checklist to describe and present this information (48). This will inform the cost-effectiveness analysis and identify any cross-site variation.

10.2 Compliance

Therapist compliance will be monitored through supervising sessions. All therapy sessions will be audio recorded if consent is provided and therapists will be asked to track the completion of key topics. During supervision sessions, sections of recordings and the manual will be reviewed and discussed. Participants will be considered as having completed the intervention if they attend 7 out of 12 sessions.

10.3 Prohibited treatments

Once entered into the trial, participants are not allowed to take part in any individual art therapy programmes. Once a participant allocated to the waiting-list has completed the 38-week follow-up time point, they will be given the option to complete the interpersonal art therapy intervention.

11 Trial procedures

11.1 Assessments

Details of outcomes and follow-up time points can be seen in Table 1 and are the same for both experimental and control groups. Assessments will be performed as close as possible to the required time point with a ±2 week follow-up window.

Figure X. Schedule of enrolment, interventions and assessments[1]

Procedures	**Screening**	**Baseline**	**Randomisation**	**Treatment Phase**	**19-week**	**Weekly assessment**	**38 week**	**Ad-Hoc**
Informed consent	X							
Eligibility assessment	X							
LDSQ	X							
Treatment allocation			X					
Demographics		X						
Medical history		X						
Q1 HONOS (WAA or LD)	X							
Randomisation		X						
Delivery of intervention				X				
Compliance				X				
MOAS		X			X	X	X	
EQ5D-3L-Self Report					X		X	
EQD5-3L Proxy					X		X	
Resource use					X		X	
ReQoL-Self Report					X		X	
ReQoL-Proxy					X		X	
BSI		X			X		X	
Adverse event assessments								X
Physician's Withdrawal Checklist								X

[1] Taken from the HRA CTIMP protocol template (2016).

11.2 Follow-up

Follow-up assessments (table 1) for all participants will be conducted 19 and 38 weeks after randomization with a ±2 weeks window. The outcome measures will be collected using an interviewer-led approach.

12 Safety reporting

The Principal Investigator is responsible for ensuring that all site staff involved in this trial are familiar with the content of this section.

All SAEs must be reported immediately (and within 24 hours of knowledge of the event) by the PI at the participating site to the CTR unless the SAE is specified as not requiring immediate reporting (see section 13.2).

12.1 Definitions

Term	Definition
Adverse Event (AE)	Any untoward medical occurrence in a participant or clinical trial participant administered an intervention which is not necessarily caused by or related to that product
Serious Adverse Event (SAE)	Any adverse event that - • Results in death • Is life-threatening* • Required hospitalisation or prolongation of existing hospitalisation** • Results in persistent or significant disability or incapacity • Consists of a congenital anomaly or birth defect • Other medically important condition***
Serious Adverse Reactions (SARs)	Any SAE occurring in a clinical trial participant for which there is a reasonable possibility that it is related to the intervention.
Suspected Unexpected Serious Adverse Reactions (SUSARs)	A SAR, the nature and severity of which is not consistent with the Reference Safety Information (RSI) for the intervention.

***Note:** The term 'life-threatening' in the definition of serious refers to an event in which the trial participant was at risk of death at the time of the event or it is suspected that used or continued use of the product would result in the subjects death; it does not refer to an event which hypothetically might have caused death if it were more severe.

**** Note:** Hospitalisation is defined as an inpatient admission, regardless of the length of stay, even if the hospitalisation is a precautionary measure for continued observation. Pre-planned hospitalisation e.g. for pre-existing conditions which have not worsened, or elective procedures, does not constitute an SAE.

***** Note:** other events that may not result in death, are not life-threatening, or do not require hospitalisation, may be considered as an SAE when, based upon appropriate medical judgement, the event may jeopardise the participant and may require medical or surgical intervention to prevent one of the outcomes listed above.

12.2 Trial Specific SAE Reporting requirements

In addition to the SAE reporting requirements above, for the purposes of this trial the following events will also be considered SAEs and must be captured on the SAE form and reported to the CTR within 24 hours of knowledge of the event:

- Incidences of Self-harm recorded in clinical/case notes

These should be completed in the participant's notes and forwarded to the CTR in the normal timeframes for CRFs.

12.3 Causality

Causal relationship will be assessed for the intervention (interpersonal art psychotherapy) and procedures. The Principal Investigator (or another delegated Health and Care Professions Council registered healthcare professional from the trial team) will assess each SAE to determine the causal relationship and the Chief Investigator (or another appropriately qualified member of the Trial Management Group) can also provide this assessment where necessary:

Relationship	**Description**	**Reasonable possibility that the SAE may have been caused by the intervention?**
Unrelated	There is no evidence of any causal relationship with the intervention	No
Unlikely	There is little evidence to suggest there is a causal relationship with the intervention (e.g. the event did not occur within a reasonable time after administration of the trial medication). There is another reasonable explanation for the event (e.g. the participant's clinical condition, other concomitant treatment).	No
Possible	There is some evidence to suggest a causal relationship with the intervention (e.g. because the event occurs within a reasonable time after administration of the trial medication). However, the influence of other factors may have contributed to the event (e.g. the participant's clinical condition, other concomitant treatments).	Yes
Probable	There is evidence to suggest a causal relationship and the influence of other factors is unlikely.	Yes
Definite	There is clear evidence to suggest a causal relationship and other possible contributing factors can be ruled out.	Yes

The causality assessment given by the Principal Investigator (or delegate) cannot be downgraded by the Chief Investigator (or delegate), and in the case of disagreement, both opinions will be provided.

12.4 Expectedness

The Chief Investigator (or another delegated appropriately qualified individual) will assess each SAE to perform the assessment of expectedness.

There are no expected AEs/SAEs. Any planned treatments at the start of the study will not be considered AE's/SAE's.

12.5 Reporting procedures

12.5.1 Participating Site Responsibilities

The PI (or delegated appropriately qualified doctor from the trial team) should sign and date the SAE CRF to acknowledge that he/she has performed the seriousness and causality assessments. Investigators should also report SAEs to their own health boards or trust in accordance with local practice.

A completed SAE form for all events requiring immediate reporting should be submitted via email to the central trial team in the CTR (SCHEMA@Cardiff.ac.uk) within 24 hours of knowledge of the event. A separate form must be used to report each event, irrespective of whether or not the events had the same date of onset.

The participant will be identified only by trial number, partial date of birth (mm/yy) and initials. The participant's name should not be used in any correspondence.

It is also required that sites respond to and clarify any queries raised on any reported SAEs and report any additional information as and when it becomes available through to the resolution of the event. Additionally, the central trial team may request additional information relating to any SAEs and the site should provide as much information as is available to them in order to resolve these queries.

Serious Adverse Event (SAE) email address:

Schema@Cardiff.ac.uk

Serious adverse events should be reported from the time of signature of informed consent, throughout the treatment period up to, end of trial.

An SAE form is not considered complete unless the following details are provided:

- Full participant trial number
- An Adverse Event

- A completed assessment of the seriousness, and causality as performed by the PI (or another appropriately qualified individual registered on the delegation log).

If any of these details are missing, the site will be contacted and the information must be provided by the site to the CTR within 24 hours.

All other AEs should be reported on the CRF following the CRF procedure described in Section 16.

12.5.2 The CTR responsibilities

Following the initial report, all SAEs should be followed up to resolution wherever possible, and further information may be requested by the CTR. Follow-up information must be provided on a new SAE form.

The CTR should continue reporting SAEs until the end of the trial.

Once an SAE is received at the CTR, it will be evaluated by staff at the CTR and sent to the Chief Investigator (or their delegate) for an assessment of expectedness. SAE should also be reported to Sponsor.

Only reports of related and unexpected Serious Adverse Events (SAEs) should be submitted to the REC. These should be sent within 15 days of the chief investigator becoming aware of the event. There is no requirement for annual safety reports in addition to the information provided through the annual progress report.

12.6 Urgent Safety Measures (USMs)

An urgent safety measure is an action that the Sponsor, Chief Investigator or Principal Investigator may carry out in order to protect the subjects of a trial against any immediate hazard to their health or safety. Any urgent safety measure relating to this trial must be notified to the Research Ethics Committee immediately by telephone, and in any event within 3 days in writing, that such a measure has been taken. USMs reported to the CTR will be handled according to CTR processes.

13 Statistical considerations

13.1 Randomisation

We will randomly allocate participants to usual care or interpersonal art psychotherapy in a 1:1 ratio (1 participant allocated to usual care for every 1 allocated to the intervention arm) using randomly permuted blocks stratified by sex and diagnosis of psychosis. The final randomisation list will be generated by a statistician otherwise not involved in the trial. Randomisation will take place online through the RedCap trial database and will be available 24 hours a day.

13.2 Blinding

The primary statistician on the trial and the research support staff from the CRN network completing the primary outcome assessment will be blind to allocation. All data cleaning and manipulation prior to statistical analysis will be carried out blind to allocated treatment. Treatment arm allocation will be

requested following completion of this and testing of analysis syntax (using dummy randomisation data).

13.3 Sample size

For the primary outcome measure Modified Overt Aggression Scale (MOAS) (49) we conducted a sample size calculation assuming a power of 90% and a type I error rate of 5%. Based on the results of the feasibility study we also assumed it would be important to detect a clinically important difference of 5 points on the MOAS scale and we assumed a common SD in the control and intervention groups of 10 points. In addition, to account for the fact that a single therapist would apply the intervention to more than one participant, we made the following assumptions to account for this type of clustering. It was assumed that each site would have a minimum of 2 therapists and the intraclass correlation (ICC) of the MOAS scores for the same therapist would be 1%. This is consistent with assumptions used in similar studies. Using these assumptions as a basis we calculated that 79 participants would be required in each group. An allowance for the correlation based on correlations observed in the feasibility study (0.25) between the baseline and post-treatment MOAS score has been included. Allowing for an assumed attrition rate of 20% the study would require 100 participants in each group or a total of 200 participants.

This would also allow the study to detect a difference of 0.5 points on the change in the Brief Symptom Inventory (BSI) (50) Positive Symptom Distress Index (PSDI) to be detected as a secondary outcome, using a SD estimate of 0.8. Based on the sample size calculated above this would result in a power in excess of 90% for the BSI comparison.

13.4 Missing, unused & spurious data

Missing data will be investigated for cause and extent. If required, the Statistical Analysis Plan (SAP) will detail the methods to be used to deal with missing data.

13.5 Procedures for reporting deviation(s) from the original SAP

These will be submitted as substantial amendments where applicable and recorded in subsequent versions of the protocol and SAP.

13.6 Termination of the trial

There is no planned early termination of the trial.

13.7 Inclusion in analysis

The primary analysis for the trial will be performed on an intention-to-treat basis therefore all participants who are randomised will be included in the analysis and so this will be conducted under the treatment policy estimate strategy.

14 Analysis

14.1 Main analysis

14.1.1 Outcome/effectiveness analysis

The analysis of the primary outcome MOAS will be performed using analysis of covariance, modelling 38 weeks follow-up MOAS score controlling for baseline MOAS score. Reflecting the sample size calculation analyses will be undertaken with 2-level hierarchical models with participants clustered within therapists. Secondary outcomes will be analysed in a similar way. Multiple imputations will be used in case of missing values in scores. The results will be summarised using point estimates, 2-sided 95% confidence intervals and p-values. Data analysis will be in accordance with a pre-specified statistical analysis plan.

14.1.2 Psychotherapy process analysis

It has been recommended that future research on psychological interventions for institutional aggression should include an assessment of patient characteristics and interpersonal styles that facilitate participation and progress during treatment (56). These process analyses will be conducted on seven of the treatment sessions for each patient, to reflect the segments of the treatment and change over time. The reading of the session transcripts together with the process codings of the WAI-O and PQS are expected to take about 1.5 hours per session.

Working Alliance Inventory-Observer version (WAI-O)

The WAI-O (Darchuk et al., 2000) is a 12- item measure of the working alliance as measured by an observer, developed from the original Working Alliance Inventory (Horvath, 1982; Raue, Goldfried, & Barkham, 1997). The WAI-O includes the subscale for bond, agreement on task and agreement on goal. The WAI-O will be rated by wo independent judges for the seven sessions. The working alliance score used in analyses will be averaged between the two raters and across the seven sessions for each patient.

Psychotherapy Process Q-set (PQS)

The PQS (59, 60) is an observer-based Q-sort psychotherapy process measure consisting of 100 cards describing (a) therapist behaviours (*n*=41), (b) patient behaviours (*n*=40), and (c) therapist-patient interactions (*n*=19) that might occur in an individual adult psychotherapy session. This will allow us to describe the treatment process in detail, while allowing for comparisons with the many previous publications using the PQS. Audio recordings of therapy sessions are reviewed by independent judges to sort each of the 100 items into a nine-category normal distribution. The PQS ratings will also be used to determine the degree to which the treatments adhere to ideal sessions according to different types of psychotherapy, including reflective functioning, supportive expressive therapy, cognitive behavioural therapy. Given the time intensive nature of these process codings, we will not double-code all seven sessions, but we will establish interrater reliability of at least .80 with expert raters before new raters can code the PQS on sessions independently.

Linguistic Analysis of Word Count (LIWC-2022)

We will apply a text analysis application called LIWC-2022 to the transcripts of the sessions. We specifically will analyze the change in patients' anger-related word use over the course of treatment, and the change in affiliation/pronoun use. As with the other two process measures we will use the transcripts of the seven sessions per treatment as a proxy of the treatment process as a whole.

14.1.1 Sub-group & interim analysis

A sub-group analysis of differences between therapy responders and non-responders will be completed. Full details of the analysis will be included in the primary trial SAP.

14.2 Qualitative analysis

The combined qualitative analysis will include a total of 20 audio-recorded and transcribed interviews during the RCT (61) for thematic analysis (62) (*n*=10 participants and *n*=10 members of the intervention delivery team).

Based upon MRC and NIHR guidance (63), the purpose of interviews will be to support process evaluation around retention, experiences of the trial and intervention, fidelity, dose, and reach. We will invite up to 10 participants (recruited from both arms) and 10 study therapists to engage in semi-structured qualitative interviews. Fully details of analysis will be included in the qualitative analysis plan (QAP)

Interview schedules for study therapists will focus on their experiences of intervention delivery (61), their experiences of training and supervision, seeking examples from therapists about their 'in-therapy' responses from the participants, and implications for clinical practice implementation (64).

14.3 Cost-effectiveness analysis

A within-trial cost-effectiveness analysis will be conducted (65). Costs will focus on the incremental costs of providing art psychotherapy relative to usual care and downstream care costs based on patients' care records (e.g. wider staff engagement and medications). Incremental effectiveness will be based on three preference-based measures: EQ-5D-3L, and ReQoL-Utility Index (ReQoL-UI) from the ReQoL-10. The EQ-5D-3L (49) and ReQoL-UI both have utility indexes (UIs) which can be used to elicit quality-adjusted life years (QALYs). The UI for the EQ-5D-3L will be based on NICE's reference case at the time of analysis, such as the crosswalk algorithm as NICE's interim position (65). The ReQoL-UI is currently under review for publication.

All three measures have underlying conceptual and methodological considerations relevant to the patient population and intended outcomes from art psychotherapy (i.e. the effect on general health status including anxiety/depression, mental health and well-being such as the ability to cope, and ability to achieve other aspects than health outcomes such as relationships/love, friendship, and support).

The choice of preference-based measure as the 'primary' outcome for the economic evaluation will be based on a within-study psychometric analysis. This post-hoc psychometric analysis will be conducted based on construct validity (i.e. correlation and effect sizes relative to clinical outcomes) and responsiveness (i.e. standardised response means, and floor and ceiling effects) relative to the other primary and secondary outcome measures.

This analysis will be used to inform decision-makers as to which measure might be the more 'appropriate' to assess cost-effectiveness given the care setting, patient population, and clinical outcomes of interest (68, 69). The cost-effectiveness results using all three measures will be reported and discussed. Point-estimate cost-effectiveness will be presented using incremental cost-effectiveness ratios. Bootstrapping will be used to report bootstrapped standard errors, and to estimate the probability of cost-effectiveness relative to a range of cost-effectiveness thresholds (including NICE's £20,000 to £30,000 per QALY threshold) to be presented using cost-effectiveness planes and cost-effectiveness acceptability curves (70). Sensitivity analysis will be used to assess point estimate uncertainty.

15 Data Management

Source Data is defined as *"All information in original records and certified copies of original records of clinical findings, observations or other activities in a clinical trial necessary for the reconstruction and evaluation of the trial. Source data are contained in source documents."* There is only one set of source data at any time for any data element, as defined in the site source data agreement.

The source data for SCHEMA will come from a variety of sources (see figure X). Data will be collected using an electronic system (eCRF system). With paper CRF back up. There will also be data collected from participants' medical notes and patient-reported questionnaires. All delegated staff at the sites will receive appropriate training to complete the CRFs.

Trial data	*Source Data*			
	Participant medical notes	Electronic System	Questionnaire	SAE form
Medical History	X			
Concurrent Medications	X			
Adverse events	X			X
MOAS			X	
EQ5D-3L: Self			X	
EQ5D: Proxy		X		
Use of Service		X		
ReQOL: Self			X	
ReQOL: Proxy		X		
BSI			X	

15.2 Completion of CRFs

All assessments and data collection will be completed using electronic CRFs hosted on a web-based system (REDCap). This is a secure encrypted system accessed by username and password and complies with General Data Protection Regulation (GDPR) 2016 and Data Protection Act (DPA) 2018. In the event that the web-based system is not accessible, paper CRFs will be used to record data. The data will then be inputted by local site staff into the web-based system once it is accessible. A full Data Management Plan will accompany this protocol and will be stored in the TMF.

If missing or questionable data are identified, a data query will be raised on a data clarification form. The data clarification form will be sent to the relevant participating site. The site shall be requested to respond to the data query on the data clarification form. The case report form pages should not be altered.

All answered data queries and corrections should be signed off and dated by a delegated member of staff at the relevant participating site. The completed data clarification form should be returned to the CTR and a copy retained at the site along with the participants' CRFs.

The CTR will send reminders for any overdue data. It is the site's responsibility to submit complete and accurate data in a timely manner.

15.2.1 Electronic CRFs

It is intended to develop data recording for this trial as a web-based system. This is a secure encrypted system accessed by an institutional password and complies with the GDPR 2016 and DPA 2018. The system can be accessed on:

<Insert Web address for CRFs Here>

A user password will be supplied to investigators listed on the delegation log upon completion of all processes required prior to opening.

15.2.2 Paper CRFs

Back-up paper CRFS will be made available, in the event the electronic database is not available. In the event a paper CRF is completed, data will subsequently be entered on to the database at a later point (within a week) by local site staff. In accordance with the principles of GCP, the PI is responsible for ensuring the accuracy, completeness, legibility and timeliness of the data reported to the CTR in the CRFs.

16 Protocol/GCP non-compliance

The Principal Investigator should report any non-compliance to the trial protocol or the conditions and principles of Good Clinical Practice to the CTR in writing as soon as they become aware of it. The CTR will assess the nature and severity of any issues of non-compliance in accordance with their SOPs. All non-compliances will be reported to the Sponsor.

17 End of Trial definition

The treatment phase will be followed by a non-interventional follow-up period which will continue for 38 weeks after the last participant completes protocol treatment.

The end of the trial is defined as the date of final data capture to meet the trial endpoints. In this case, the end of the trial is defined as the date on which the completion of any follow-up monitoring and data collection occurs. The sponsor must notify the main REC of the end of a clinical trial within 90 days of its completion or within 15 days if the trial is terminated early.

18 Archiving

All data will be kept for 5 years in line with CNTW Sponsor archiving process for clinical research. This data will be stored confidentially on password-protected servers maintained on the Cardiff University Network. Files will only be accessible to researchers responsible for the running of the trial and the Chief Investigator (CI). All procedures for data storage, processing and management will comply with the GDPR 2016. All paper records will be stored in a locked filing cabinet, with keys available only to researchers and the Chief Investigator. The Trial Statistician will carry out the analyses. All essential documents generated by the trial will be kept in the Trial Master File..

19 Regulatory Considerations

19.1 Ethical and governance approval

This protocol has approval from a Research Ethics Committee (REC) that is legally "recognised" by the United Kingdom Ethics Committee Authority for review and approval.

This trial protocol will be submitted through the relevant permission system for global governance review depending on the location of the lead site e.g. HCRW/HRA.

Approval will be obtained from the host care organisation which will consider local governance requirements and site feasibility. The Research Governance approval of the host care organisation must be obtained before the recruitment of participants within that host care organisation.

19.2 Data Protection

The CTR will act to preserve participant confidentiality and will not disclose or reproduce any information by which participants could be identified, except where specific consent is obtained. Data will be stored securely and will be registered in accordance with the GDPR 2016 and DPA 2018. The data custodian is Cumbria, Northumberland, Tyne and Wear NHS Foundation Trust.

19.3 Indemnity

SCHEMA is sponsored by CNTW NHS Trust and fully coordinated by the Centre for Trials Research, Cardiff University.

All participants will be recruited at NHS sites and therefore the NHS indemnity scheme/NHS professional indemnity will apply with respect to claims arising from harm to participants at site management organisations.

19.4 Trial sponsorship

CNTW NHS Trust will act as Sponsor for the trial. Delegated responsibilities will be assigned to the sites taking part in this trial.

The Sponsor will be delegating certain responsibilities to Cardiff University (CTR), the Chief Investigators, Principal Investigators, host sites and other stakeholder organisations as appropriate in accordance with the relevant agreement that is informed by regulation and trial type.

19.5 Funding

This trial has been funded by the NIHR through their career development award scheme and will be published in full by the NIHR. The trial will be adopted on the NIHR portfolio.

Participants will receive a £15 voucher at pre-, post-assessment, and £20 at follow-up (total £50 per participant), this amount also fits within practice guidance or use of retention strategies in RCTs (43).

20 Trial management

20.1 TMG (Trial Management Group) and Advisory Group (AG)

The TMG will have regular meetings (every 4-6 weeks) prior to and during the study (Y1-4) chaired by the CI with CTR support. AG meetings will be chaired by Mr Andrew McClough (Collaborator). TMG members will sign up to the remit and conditions set out in the TMG Charter.

20.2 TSC (Trial Steering Committee)

Given that the intervention has been classed as low risk, there will not be a separate Data Monitoring Ethics Committee (DMEC) unless the Trial Steering Committee (TSC) deem it necessary to convene one. Instead, there will be a TSC only that will meet at least annually. The TSC will have an independent chair Dr Catherine Carr, Queen Mary University, London (UK). Dr Carr is the CI of a large-scale Arts Psychotherapy NIHR-Health Technology Assessment (HTA) funded Trial. The committee will convene at the launch of the trial and key milestones; at the start of recruitment, at 'traffic-light' assessment, at full recruitment, at the completion of treatment, and after preliminary analysis of trial data. TSC members will be required to sign up to the remit and conditions as set out in the TSC Charter.

21 Quality Control and Assurance

21.1 Monitoring

The clinical trial risk assessment has been used to determine the intensity and focus of central and on-site monitoring activity in the SCHEMA trial. Low monitoring levels will be employed and are fully documented in the trial monitoring plan.

Investigators should agree to allow trial-related monitoring, including audits and regulatory inspections, by providing direct access to source data/documents as required. Participant consent for this will be obtained.

Findings generated from on-site and central monitoring will be shared with the Sponsor, CI, PI & local R&D.

21.2 Audits & inspections

The trial is participant to inspection by Research Ethics Committee as the regulatory body. The trial may also be participant to inspection and audit by CNTW NHS Trust, under their remit as Sponsor.

22 Publication policy

All publications and presentations relating to the trial will be detailed in the publication policy which will be drafted and authorised by the TMG. It will state principles for publication, describe a process for developing output, contain a map of intended outputs and specify a timeline for delivery. The publication policy will respect the rights of all contributors to be adequately represented in outputs (e.g. authorship and acknowledgements) and for the trial to be appropriately acknowledged. Authorship of parallel studies initiated outside of the TMG will be according to the individuals involved in the project but must acknowledge the contribution of the TMG and the CTR.

In addition to process evaluation, the participant interviews will provide material and content that can inform dissemination through theatre company performances by 'Lawnmowers Independent Theatre Company', run by and for people who have ID. Participants will be informed within the consent process about the purpose of the interviews and how their comments will be used. Members of Lawnmowers who have ID will be involved in developing and shaping the qualitative interview topic schedule.

23 Milestones

WP1 (Year 1) Trial development

Ethical approval, training study therapists, and site initiation in support of objectives 1-3.

WP2 (Year 2-4) Effectiveness, cost-effectiveness, and psychotherapeutic processes

Analysis/synthesis of RCT outcomes, cost-effectiveness, and psychotherapeutic processes/mechanisms will achieve objectives 1-3.

WP3 (Year 5) Dissemination and key stakeholder engagement

National/International dissemination via conferences/publications, engagement events/meetings/theatre company performances for key stakeholder groups - service-users, researchers, health providers, and commissioners will achieve objective 4.

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