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Evaluating the efficacy of an AI-delivered, neurosymbolic, human-supervised digital intervention for depression and anxiety versus standard cognitive-behavioural therapy in young persons and adults

Submission date
29/04/2026

Recruitment status
Not yet recruiting

Registration date
06/05/2026

Overall study status
Ongoing

Last Edited
05/05/2026

Condition category
Mental and Behavioural Disorders

[X] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[X] Record updated in last year

Plain English summary of protocol
Background and study aims
Depression and anxiety are common mental health conditions that can significantly affect daily life. Cognitive-behavioural therapy (CBT) is an effective treatment, but many people face long waiting times to access it. Nook is an AI-enabled digital programme developed by PsyScale that delivers structured psychological support based on CBT and ACT (Acceptance and Commitment Therapy) through a conversational interface. This study aims to find out whether Nook works as well as standard remote CBT for reducing symptoms of depression and anxiety.

Who can participate?
Adults and young people aged 16-64 years who have moderate to moderately-severe symptoms of depression and/or moderate to severe anxiety symptoms, sufficient English language skills, and access to an internet-connected device. Participants must not have severe depressive symptoms or high clinical risk.

What does the study involve?
Participants will be randomly assigned to either use Nook for 6-10 weeks or receive standard remote CBT. They will complete questionnaires about their symptoms at several points during the study. There are no invasive tests or biological samples required.

What are the possible benefits and risks of participating?
By taking part, participants will be helping to find out what works best for people with anxiety and depression. If Nook is shown to work as well as regular therapy, it could help many people access support faster. As with any therapy, some participants may experience difficult feelings, frustration, or feel worse before feeling better. Additional minor risks include questionnaire burden, fatigue, and difficulty concentrating. There is a small chance Nook could produce an unexpected response, though qualified clinicians monitor the system at all times.

Where is the study run from?
PsyScale Ltd. (UK)

When is the study starting and how long is it expected to run for?
June 2026 to January 2027.

Who is funding the study?
PsyScale Ltd. (UK)

Who is the main contact?
The main contact for this study is Stephanie Argue from, Senior Project Lead at Lindus Health, stephanie.argue@lindushealth.com

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Integrated Research Application System (IRAS)
369133

Study information

Scientific Title
Evaluating the efficacy of an AI-delivered, neurosymbolic, human-supervised digital intervention for depression and anxiety versus standard cognitive-behavioural therapy in young persons and adults: a pivotal, randomised, controlled, non-inferiority trial

Study objectives
To determine whether Nook is non-inferior to standard CBT-based talking therapy in reducing symptoms of depression and/or anxiety at 9 weeks post-randomisation.

Ethics approval required
Ethics approval required

Ethics approval(s)
submitted 28/04/2026, South Birmingham REC (2 Redman Place, Stratford, London, E20 1JQ, United Kingdom; +44 207 104 8107; southbirmingham.rec@hra.nhs.uk), ref: 26/WM/0050

Primary study design
Interventional

Allocation
Randomized controlled trial

Masking
Open (masking not used)

Control
Active

Assignment
Parallel

Purpose
Treatment

Study type(s)

Health condition(s) or problem(s) studied
Depression and anxiety (Generalised Anxiety Disorder and/or Major Depressive Disorder)

Interventions
Arm 1 – Nook (Investigational Device): Participants will receive access to Nook, a clinician-supervised, AI-enabled digital psychological intervention developed by PsyScale. Nook delivers structured, evidence-based psychological content derived from Cognitive Behavioural Therapy (CBT) and Acceptance and Commitment Therapy (ACT) via an interactive, text-based conversational interface, supplemented by guided exercises and audio components. The programme consists of four core therapeutic modules (Values and Behavioural Activation, Cognitive Defusion, Sleep and Circadian Regulation, and Graded Exposure), delivered in a fixed sequence, followed by a consolidation and relapse-prevention module. Typical intervention duration is 6–10 weeks, with sessions approximately two times per week and an average session length of 20–25 minutes. Nook is delivered via mobile app, web browser, or tablet under ongoing clinician supervision.

Arm 2 – Standard CBT (Control): Participants will receive standard cognitive-behavioural therapy delivered remotely by a qualified therapist for 9 consecutive weeks, representing the current standard of care for depression and/or anxiety.

Both arms will be compared on clinical outcomes to assess the non-inferiority of Nook relative to standard CBT.

Participants will be randomised in a 1:1 ratio and is stratified by age (16-17, 18-21, 22-64) to ensure balanced allocation across clinically and regulatorily meaningful developmental groups.

Intervention Type
Device

Phase
Not Applicable

Drug/device/biological/vaccine name(s)
NOOK

Primary outcome(s)
1. Depression and anxiety symptom severity measured using Patient Health Questionnaire (PHQ-9 or PHQ-A) and Generalised Anxiety Disorder 7-item scale (GAD-7) at Baseline, 9 weeks post-randomisation

Key secondary outcome(s))
1. Caseness recovery measured using PHQ-9 (or PHQ-A) score <10, and/or GAD-7 score <8 at 9 weeks

2. Reliable improvement measured using a reduction of ≥6 points on the PHQ-9 (or PHQ-A) and /or ≥4 points on the GAD-7, without a corresponding reliable deterioration on the other measure (assessed only for participants meeting caseness at baseline) at 9 weeks

3. Health-related quality of life measured using the EQ-5D-5L (47), a validated, preference-based measure of health-related quality of life that enables estimation of quality-adjusted life years (QALYs) at 9 weeks

Completion date
27/01/2027

Eligibility

Key inclusion criteria
1. Have symptoms of generalised anxiety disorder and or symptoms of major depressive disorder as the primary reason for seeking treatment as determined by a psychological well-being practitioner
1.1. Symptoms may meet criteria for either or both disorders
2. Meet symptom severity criteria on either validated screening measure
2.1. Depression assessed using PHQ-9 or PHQ-A for young people with a total score between 10 and 19 corresponding to moderate to moderately severe symptoms
2.2. Anxiety assessed using GAD-7 with a total score between 8 and 21 corresponding to mild to severe symptoms
3. Aged 16 to 64 years
4. If taking psychotropic medication for depression and or anxiety, be on a stable regimen for at least 6 weeks prior to screening with no initiation, discontinuation or dose change during that period
5. Have reliable access to a compatible internet connected device and be able to use it for screening and eligibility, the intervention and assessments with any potential costs clearly noted in the participant information sheet
6. Possess sufficient English language proficiency and cognitive capacity to engage with the digital therapeutic content and complete questionnaires
7. Provide informed consent
8. Be willing to be randomised and to participate in a clinically supervised CBT based AI programme including completion of scheduled outcome assessments

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
16 years

Upper age limit
64 years

Sex
All

Total final enrolment
0

Key exclusion criteria
1. Depression assessed using PHQ-9 or PHQ-A for young people with a total score of 20 or higher
2. Present with a primary or comorbid diagnosis or history that is unsuitable for a digital CBT based intervention as judged by the investigator, including
2.1. Post traumatic stress disorder or complex trauma
2.2. Psychotic disorder, bipolar disorder and or mania
2.3. Complex or treatment resistant obsessive compulsive disorder
2.4. Personality disorder
2.5. Eating disorder
2.6. Substance use disorder or alcohol use disorder
3. Exhibit high risk clinical concerns, including
3.1. Current suicidal ideation with intent or plan as indicated by PHQ-9 score and or participant disclosure
3.2. Suicide attempt within the past 12 months
3.3. Ongoing self harming behaviours
3.4. Requirement for urgent or crisis mental health intervention as indicated by PHQ-9 score and or participant disclosure
4. In participants aged 25 years and under, current treatment with an antidepressant medication that was initiated or dose adjusted within the past 12 weeks due to the recognised increased risk of suicidal thoughts and behaviours during the early phases of antidepressant treatment in this age group
5. Have been referred to or managed by a mental health crisis intervention team or equivalent, or admitted as an inpatient within psychiatric services in the last 12 months
6. Are currently receiving structured psychological therapy for anxiety or depression delivered by another provider
7. Use of medications indicative of severe mental illness or clinical instability, including
7.1. Antipsychotic medication excluding low dose use for non psychiatric indications where clinically appropriate
7.2. Regular use of sedative hypnotic medication such as daily benzodiazepines or Z drugs suggesting clinical instability
7.3. Current or recent use within the past 3 months of psychedelic assisted therapy involving substances such as MDMA, psilocybin or ketamine, where this indicates ongoing clinical instability or participation in an active interventional mental health treatment
8. Participation in another interventional clinical trial or use of investigational drugs in the last 30 days
9. Any other significant disease or disorder which, in the opinion of the investigator, may put the participant at risk because of participation in the trial, influence the results of the trial, or affect the participant’s ability to participate in the trial

Date of first enrolment
01/06/2026

Date of final enrolment
01/09/2026

Locations

Countries of recruitment

United Kingdom

England

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Sponsor information

Organisation
PsyScale Ltd

Funder(s)

Funder type

Funder Name
PsyScale Ltd

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available