

Changing unhelpful thinking patterns before therapy for people with cluster C personality problems

Submission date 24/07/2026	Recruitment status No longer recruiting	☐ Prospectively registered
Registration date 27/07/2026	Overall study status Completed	☐ Protocol
Last Edited 27/07/2026	Condition category Mental and Behavioural Disorders	☐ Statistical analysis plan
		☐ Results
		☐ Individual participant data
		☒ Record updated in last year

Plain English summary of protocol

Background and study aims

People with cluster C personality disorders often experience persistent patterns of negative thinking about themselves, other people and the world around them. These unhelpful thinking patterns can contribute to emotional difficulties and problems in daily life.

This study aimed to investigate whether a computer-based Cognitive Bias Modification Imagery (CBM-I) programme could help people with cluster C personality problems develop more positive thinking patterns. The study also examined whether the intervention could reduce psychological symptoms and personality-related difficulties.

Who can participate?

Adults aged 18 to 75 years with a cluster C personality disorder or personality disorder not otherwise specified (PD-NOS), who were able to use a computer and had internet access at home.

What does the study involve?

Following a baseline period, participants completed a computer-based CBM-I training programme every day for two weeks.

Participants were asked to complete questionnaires and assessments throughout the study. These measured changes in thinking patterns, emotions, psychological symptoms and personality-related difficulties.

Researchers compared participants' results before and after the training to investigate whether the intervention had a positive effect.

What are the possible benefits and risks of participating?

Participants may have benefited if the training helped them develop more positive thinking patterns and reduced psychological symptoms. The findings may help develop additional treatment options for people with cluster C personality disorders.

The risks associated with participation were considered low. Participants may have found completing questionnaires and assessments tiring, and the computer training repetitive or boring.

Where is the study run from?

G-Force Psychomedical Centre, Netherlands.

When is the study starting and how long is it expected to run for?

January 2014 to December 2018.

Who is funding the study?

G-kracht Psychomedisch Centrum, Netherlands.

Who is the main contact?

Dr Michiel van Vreeswijk, mf.vanvreeswijk@g-kracht.com.

Contact information

Type(s)

Principal investigator, Scientific, Public

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Additional identifiers

Study information

Scientific Title

Cognitive bias modification for patients with cluster-C personality problems (CBM-I ST) a pre-therapy

Acronym

CBM-I-ST

Study objectives

Primary objective:

Is CBM-I effective in modifying cognitive biases in patients with Cluster C personality disorders or personality disorder not otherwise specified (PD-NOS)?

Secondary objective(s):

Will patients experience a significant reduction in psychological symptoms and personality-related problems following CBM-I?

Can mental flexibility successfully predict changes in cognitive biases among patients who have undergone CBM-I?

Ethics approval required

Ethics approval required

Ethics approval(s)

Approved 01/12/2013, Central Committee on Research Involving Human Subjects (Centrale Commissie Mensgebonden Onderzoek; CCMO) (Postbus 16302, Den Haag, 2500 BH, Netherlands; +31 070340 6700; ccmo@ccmo.nl), ref: NL46102.058.13/ P13.195

Primary study design

Interventional

Allocation

N/A: single arm study

Masking

Open (masking not used)

Control

Uncontrolled

Assignment

Single

Purpose

Treatment

Study type(s)**Health condition(s) or problem(s) studied**

Mental health patients with cluster C personality problems

Interventions

Intervention: Cognitive Bias Modification for Interpretation (CBM-I) as a Pre-Therapy Intervention for Cluster C Personality Problems

Participants allocated to the intervention phase receive a structured Cognitive Bias Modification for Interpretation (CBM-I) programme designed to promote more positive interpretations of everyday situations and reduce maladaptive cognitive biases associated with Cluster C personality disorders and personality disorder NOS. The intervention is delivered as a computer-based training programme completed independently at home over two weeks.

Before beginning the intervention, participants attend an individual face-to-face orientation session with a researcher. During this session, participants are instructed and trained to generate vivid mental imagery while adopting a first-person ("field") perspective. Particular

emphasis is placed on imagining situations as though they are personally occurring rather than engaging in verbal or analytical processing. Following this training, participants complete their first CBM-I session under researcher supervision to ensure understanding of the task and procedures.

The CBM-I intervention is delivered through the internet-based SOTO platform, developed by the Faculty of Psychology and Neuroscience at Maastricht University. Participants are required to complete one training session per day for 14 consecutive days. During the intervention period, participants also complete daily self-report measures, including the Positive and Negative Affect Schedule (PANAS) and a visual analogue scale assessing Cluster C-related cognitions and symptoms.

Each daily CBM-I session consists of 64 positively resolved ambiguous scenarios presented in audio format. Across the 14-day intervention, participants are exposed to a total of 896 positive training paragraphs. The scenarios specifically target core maladaptive schemas commonly associated with Cluster C personality pathology and the broader schema domain of Disconnection and Rejection. These schemas include:

1. Abandonment/Instability (AB)
2. Mistrust/Abuse (MA)
3. Emotional Deprivation (ED)
4. Defectiveness/Shame (DS)
5. Social Isolation/Alienation (SI)
6. Disconnection and Rejection (DR)

Each scenario begins with an ambiguous interpersonal or daily-life situation and concludes with a positive outcome, thereby encouraging the development of more adaptive interpretations. For example, a scenario targeting abandonment concerns may initially suggest that a partner is leaving, but concludes with information indicating commitment and support. Through repeated exposure, participants are expected to develop a stronger tendency to interpret uncertain situations benignly or positively.

The 64 scenarios presented during each session are organised into eight blocks of eight scenarios. Short participant-controlled breaks are permitted between blocks. During these breaks, reminders of the task instructions are displayed to reinforce the use of imagery-based processing. The order of presentation is randomised for each participant and session.

The scenarios are professionally recorded and presented through headphones. Approximately half of the scenarios are narrated by a female voice and half by a male voice. Each audio scenario lasts approximately 10 to 15 seconds. Participants are loaned headphones if required to ensure consistent delivery of the intervention.

To encourage active engagement with the imagery process, participants are asked after each scenario to rate the vividness of the mental image they generated in response to the situation. Vividness is assessed using a 5-point Likert scale ranging from 1 ("not at all vivid") to 5 ("very vivid"). Each session begins with a neutral practice scenario to familiarise participants with the task; ratings from this practice item are neither recorded nor analysed.

Intervention Type

Behavioural

Primary outcome(s)

1. Changes in negative or dysfunctional beliefs over time in people with personality disorders at day 14 measured using the Visual Analogue Scale for Maladaptive Core Beliefs (VAS-MCB) at daily time points during the baseline phase and during the intervention phase
2. Changes in positive and negative emotions at day 14 measured using the Positive and Negative Affect Schedule (PANAS) at daily time points during the baseline phase and during the intervention phase

Key secondary outcome(s)

1. Early maladaptive schemas, emotional deprivation, and abandonment measured using the Young Schema Questionnaire (YSQ) at baseline, end of baseline phase, post-intervention, 4-week follow-up
2. Temporary emotional, cognitive, and behavioral states experienced measured using the Schema Mode Inventory (SMI) at baseline, end of baseline phase, post-intervention, 4-week follow-up
3. Psychological problems, psychiatric symptoms, and treatment progress measured using the Symptom Checklist-90 (SCL-90) at baseline, end of baseline phase, post-intervention, 4-week follow-up
4. Personality disorder evaluation measured using the Assessment of DSM-IV Personality Disorders (ADP-4) at baseline, end of baseline phase, post-intervention, 4-week follow-up
5. Interpersonal difficulties measured using the Inventory of Interpersonal Problems (IIP) at baseline, end of baseline phase, post-intervention (2 weeks), and 4-week follow-up

Completion date

31/12/2018

Eligibility

Key inclusion criteria

1. Cluster C personality disorder
2. Able to participate for three months
3. Motivated to participate for a computertask
4. IQ heigher than 80
5. Able to read, speak, understand, write in Dutch language
6. Able to work with a computer
7. Having a computer at home with internet connection

Healthy volunteers allowed

No

Age group

Mixed

Lower age limit

18 Years

Upper age limit

75 Years

Sex

All

Total final enrolment

34

Key exclusion criteria

1. Lifetime psychotic disorder other than brief psychotic disorder
2. Substance dependence needing detox
3. ADHD
4. (Subthreshold) narcissistic personality disorder or anti-social personality disorder
5. Serious medical illness
6. Previous schema therapy for more than three months

Date of first enrolment

22/01/2014

Date of final enrolment

31/12/2018

Locations

Countries of recruitment

Netherlands

Sponsor information

Organisation

G-Force Psychomedical Centre (G-kracht Psychomedisch Centrum)

Funder(s)

Funder type

Funder Name

G-kracht Psychomedisch Centrum

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	version 1	31/08/2013	27/07/2026	No	Yes