

# Compassionate ProReal: online therapy supported by avatar based virtual world software for depression and long term health conditions

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## What is Compassionate ProReal?

- The proposed study will develop and evaluate an internet-delivered avatar therapy for people with depression and LTCs.
- It utilises videoconferencing to deliver therapy to patients in their homes. ProReal ([www.proreal.world](http://www.proreal.world)), an online avatar therapy, will be embedded in the remotely-delivered videoconference session.
- As a manualised adjunctive intervention it is designed to be delivered over 6 sessions by psychological therapists.
- Patients will access the ProReal software between sessions and complete self-guided homework tasks.
- As a 'blended' therapy it includes 'synchronous' (videoconferencing and live Proreal) together with 'asynchronous' elements (guided and supported self-help homework).
- 'Props' or objects are placed in the virtual landscape to symbolise the negative impact the LTC has had on the patient's life.
- Avatars function as vehicles to teach cognitive restructuring, with compassion focused ideas integrated, to help self-critical patients develop a kinder, more balanced perspective on their thoughts.

## Rationale

- People with LTCs have elevated depression rates, poorer prognosis and higher healthcare costs.
- Some people's mental health condition may also make leaving home, going to a clinic and meeting someone too challenging.
- Novel internet-delivered therapies could potentially address these gaps.
- While CBT is recommended (NICE, 2009), some patients struggle with cognitive restructuring being unable to 'feel' their new rational perspective.
- Compassion-focused therapy (Gilbert, 2010) is an emerging effective alternative particularly appropriate for self-critical depressed patients who fail to respond to CBT's logic-based approach.
- CFT utilizes imagery which stimulates physiological systems associated with wellbeing.
- Compassionate imagery has been successfully delivered through online self-help (McEwan and Gilbert, 2015) and immersive virtual reality (Falconer et al., 2016) but IVR is expensive and unsupported digital treatments are less effective (Richards and Richardson, 2012).
- ProReal, a desktop avatar application is therapist-facilitated, thus obviating these shortcomings.



**This proof-of-concept Phase 1 study proposes to develop a treatment manual and explore initial effectiveness and mechanisms of change amongst depressed patients with a LTC. This will provide pilot data for a later Phase II randomised feasibility study.**

## Method

- A concurrent multiple-baseline case series design will be used.
- Six sessions of Compassionate ProReal will be delivered to 15 patients with a LTC and depression from primary mental health care services.
- Multiple-baseline and session-by-session state mood and compassion measures will be taken and analysed using multivariate statistics.
- A wearable device wirelessly connected to the patient's computer will collect heart rate variability data throughout each session.
- Additional psychophysiological measures (cortisol, sAA, interoception) will be collected in pre and post-therapy lab sessions.

## Impact

- This research contributes to the development of alternative, economical and accessible therapies for depression easily assimilated in existing care pathways such as UK Improving Access to Psychological Therapies (IAPT) services.
- This meets the needs of patients with depression and a LTC whose disability impedes clinic attendance.

