

# Zero OCD

## Getting rid of your obsessions with your own smartphone: Augmented Reality app-based Cognitive Behaviour Therapy for Obsessive Compulsive Disorder Health-economic and process evaluation alongside a Randomized Controlled Trial.

### KEYWORDS

Obsessive-Compulsive Disorder, Augmented Reality, Smartphone application, Randomized Controlled Trial, Economic Evaluation, Process evaluation,

### DURATION

36 months

### ABSTRACT

With the dwindling healthcare budgets and increasing number of people suffering from mental disorders, the need for accessible health care has never been so urgent as now. If the COVID-19 pandemic has made one thing clear, is that (semi-)automated mental health care is the future and that right now is the moment to take action. Our aim is to make evidence-based mental health care better accessible and affordable for everyone and everywhere. Our idea takes the next step in technology-supported mental health services, namely an automated Augmented Reality (AR) Cognitive Behaviour Treatment (CBT) app with minimal digital therapist support to treat obsessive compulsive disorder (OCD). In this Randomized Controlled Trial (RCT), we will investigate the clinical effectiveness of our AR-CBT OCD app compared with an active control condition: CBT via videoconferencing. OCD patients will be recruited from the general population in four different countries: Sweden, Switzerland, Belgium (Flanders) and The Netherlands. The AR-CBT application can be accessed on participants' own smartphone. Both treatments will be delivered over a period of 16 weeks in participants' natural environments. The primary outcome measure will be OCD symptoms as measured with the Yale Brown Obsessive Compulsive Scale. Baseline, 16-weeks post-test and 6-month follow-up self-report assessments will be administered online. Analysis will be based on intention-to-treat. Indispensable for implementation purposes, we will carry out a health-economic evaluation within the RCT by integrating research on costs. Depressive symptoms, quality of life, absence at work and use of healthcare are secondary outcome measures. Incremental costs per Quality Adjusted Life Year gained will be calculated with the EQ-5D-5L. A second incremental cost-effectiveness ratio will be calculated based on functioning level. Finally, based on the results, a budget impact analysis will be conducted according to international guidelines. In addition, a process-evaluation is simultaneously carried out in the aforementioned countries to examine the current implementation barriers and solutions for VR/AR mental health apps on the level of patient, therapist, mental health institutes, and (inter)national policy and regulations. This will result in recommendations for strategies of European-wide implementation of evidence-based AR/VR eMental health apps in mental health care. Our AR-CBT treatment app, which only requires a smartphone, potentially provides an effective, scalable treatment that can simply be downloaded from the app store. Our idea not only involves an encompassing therapy to effectively treat a burdensome, severe disorder, but simultaneously provides a template for other mental health disorders. In doing so, it offers a promising solution for treating one of the most disabling mental health disorders worldwide and can most likely greatly

reduce the cost of mental health care. The economic knowledge gained from the proposed project, along with the strategies recommended for implementation, has the potential to provide an indispensable footstep in making evidence-based state-of-the art eMental health a cost-effective solution for everyone with a smartphone.

## PARTNERS

PI	Organisation	Country
Donker	Vrije Universiteit Amsterdam	The Netherlands
Berger	University of Bern	Switzerland
Carlbring	Stockholm University	Sweden
Eker	Orb Amsterdam	The Netherlands
Krieger	University of Bern Outpatient Clinic	Switzerland