Proceedings of the
4th International Conference on Design4Health
Melbourne Cricket Ground, Melbourne, Australia

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Editors: Deirdre Barron and Kurt Seemann
Preamble

Welcome to the first Design4Health Conference in Australia, convened by the Centre for Design Innovation, Swinburne University of Technology, on behalf of, and jointly chaired with, the conference founders, Lab4Living, Sheffield-Hallam University, UK.

The Centre for Design Innovation investigates and validates the key factors that underpin the design of products, services, systems, spaces, and symbols to improve the chance of user uptake and impact.

Lab4Living, who established the conference, is an interdisciplinary research initiative that develops products and environments, and proposes creative strategies for dignified, independent and fulfilled living for all.

This international event invited the world of health and design practitioners and researchers to come together between the 4th and 7th of December, 2017 in Melbourne, Victoria, Australia.

About the conference

Design4Health is an international conference that brings together designers, health professionals and creative practitioners with researchers, clinicians, policy makers and users from across the world to discuss, disseminate and test their approaches and methods in the ever-changing nexus between design and health.

The conference hosted a series of different events that provided an active forum to explore how the disciplines of design and health might intersect to bring forth new ways of thinking and working in what is a dynamic, innovative and increasingly important area of research and practice. The central question has been:

How can we work together to achieve positive and sustainable impact on the social, economic and cultural factors within our communities and beyond?

The range and insights presented at the D4HMelbourne event has revealed both the enormous value of this movement in research, and the benefits from undertaking serious, applied, and critical efforts that design and health expertise generate when they come together.

We invite you to browse the innovative ideas and critiques scoped in these proceedings

Sincerely

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Lab4Living | Art & Design Research Centre | Sheffield Hallam University | Sheffield | S1 1WB | tel: +44 (0) 114 225 6918 | fax: +44 (0) 114 225 6931 | www.design4health.org.uk

Centre for Design Innovation | Swinburne University of Technology | Johns Street | Hawthorne | Victoria | 3122 | Australia | tel: +61 3 9214 8000 | www.cdiengage.com.au
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SlowMo/Mo—digital technology to provide support in coping with daily life

West, J., Wojdecka, A. and Matthews, E.

Helen Hamlyn Centre for Design, Royal College of Art, London

Keywords
Digital health, mhealth, etherapy, inclusive design

Introduction
This project builds on previous work bringing inclusive design methodologies and expertise to therapy for paranoid and suspicious thoughts in people with severe mental health problems. Culminating in an interactive digital platform to support service users both in and outside of therapy sessions, this prior work established core design principles (West et al 2016), with the platform currently going through a multi-centre randomised controlled trial (Garety & Hardy, 2017).

This project seeks to extend the benefits of the digital platform beyond diagnosed mental health difficulties to include a standalone app for anyone seeking to better regulate emotions and cope with daily life. Difficult emotions and life stressors are ubiquitous, but access to psychological interventions is limited (Haller et al, 2014). Even when available, people can be reluctant to take them up (O’Dea et al, 2015).

The establishment of design principles when considering ‘extreme’ users (service users with severe mental health problems) lays the foundation for interventions that benefit a much broader cohort. It is in the appropriate application (and augmentation) of these principles that the success of this project hinges, with broader implications for digital innovations for mental health.

Background
SlowMo is a digital platform resulting from a partnership between psychologists and designers, working closely throughout each project phase with front line therapists and mental health service users presenting with differing degrees of psychosis. Previous therapy had comprised six sessions, supported with basic visual materials, helping service users notice unhelpful thoughts and fast thinking habits, and improve slower thinking. The SlowMo intervention redesigned the content, adding an app extending the benefits of therapy beyond the consulting room to people’s daily lives. The intervention is being tested in a randomised controlled trial. In parallel, the team is building on this work to create an intervention for a wider user base: those who seek better emotional regulation and support in coping with daily life. Translating the SlowMo design and therapeutic principles into a commercial product broadens the reach and potential benefits, but requires a different design approach.
**Methods**

The fundamental therapeutic principles underpinning SlowMo include (among others) the ability to recognise unhelpful thoughts, to slow down ‘fast’ thinking (jumping to conclusions), and the identification of alternative explanations for the observed situation or upsetting thought. The design principles of SlowMo include (among others) representing thoughts as bubbles, resizing them, and slowing down ‘spinning’ bubbles to encourage the user to engage in slower thinking. A larger scale clinical trial will establish its clinical efficacy compared to treatment as usual. The project aim is to adapt and expand both the therapeutic and design principles to target a broader audience with common emotion difficulties experienced by the majority of the population.

The team combined the ‘Double Diamond’ methodology (Design Council, 2015) with agile working with developers (Dybå, Dingsøyr et al. 2008). Insights were gained through extensive interviews and workshops with a variety of potential users. Personas were built up from these insights, informing subsequent co-creation sessions. A number of extra functions and concepts were created, and refined using critical feedback. The additional app framework and functionality were refined, along with the visual language and branding. Rapid iterative design and coding work packages allowed for the collaborative development and testing of sections of the app.

**Design**

The aim was to expand the focus beyond fast thinking to a broader range of thinking habits targeted in CBT, and incorporate other psychotherapeutic strategies (i.e. relaxation, distraction, mindfulness). This integrated a range of different therapeutic approaches to create an emotional regulation toolkit and bring the benefits of varied strategies to as many people as possible.

Much of the original SlowMo design work is retained. Bubbles are still used to recognise and visualise difficulties, and the focus on slowing down thinking and logging alternative and less upsetting thoughts is included as a type of emotion regulation, sitting within a broader framework of features and functions. Bubbles now reflect any type of difficulty and coping strategy (e.g. behaviours, relationships, emotions, as well as thoughts).

The research, mirroring empirical findings, suggested that supported therapy is more helpful than pure self-help. This led to the development of ‘Mo’, a personalised digital therapist. Mo supports the user with their difficulties, helps them find strategies to cope and encourages them to focus on solutions. The research pointed to the importance of the digitised therapist’s interpersonal style for users’ engagement. Responding to the insights, Mo can adopt one of three different personality types (selected by the user, delivering the same content in differing styles): friend, therapist and coach.

The app is structured such that Mo provides an introduction and overview to the user, as well as checking in with them periodically. Mo guides them through much of the SlowMo content, to help support more helpful thinking habits. These are now conceptualised as ‘life traps’ to reflect the broader range of issues people may input into the new interface, and represented visually as well as by text. Mo can also direct the
user to a ‘GoMo’ section of the app (games to support distraction) and a ‘FlowMo’ section (tasks to support relaxation and mindfulness).

These functions augment the original ‘SlowMo’ to broaden the appeal to a range of users. The addition of Mo, and the ability to tailor the personality of the digital therapist is an important feature, as there is no longer a human therapist present.

**Conclusion**

The methods employed in both the original SlowMo and the augmented version (with Mo) were largely similar. The aims and insights were different, leading to distinct design solutions, albeit with overlapping features and functions. The additional features in Mo allow for targeting a broader market and range of needs. This reflects a focus on improving access to psychological techniques in the general population, to address limited availability of therapy and barriers to people seeking help. It is envisaged that this broader focus will lend itself to user testing with diverse groups, with insights iteratively incorporated into future versions of Mo, laying the foundations for a strong commercial product launch.

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