# Human-Computer Interaction Contributions in Mental Health: A Framework to Guide Psychosocial Intervention Design

## BACKGROUND

Researchers, health systems, and startups increasingly turn to technology to deliver or augment psychosocial interventions. E.g.,

- to increase access to interventions and scale them out or up
- to support practicing skills or otherwise engaging in a mental health intervention between sessions

#### How might we ...



coordinate expertise so that digital mental health technologies can deliver on their promise?



Technology-delivered or technology-supported interventions have shown potential. However, many of these technologies may fail to deliver on their promise or even increase inequities.



**balance** design innovation with retaining psychologically active components?

**CORE IDEA:** - MULTIPLE SCOPES OF CONTRIBUTION ARE POSSIBLE (& NEEDED!) **Reframe intervention design as experience design** readines Sociocultura HCI: Thinks in design briefs background & Delivers an intervention system that is community Intervention fine-tuned for—and embedded in— (based on user needs) implementation specific real-world contexts, with accompanying implementation strategies to address organizational, individual, & contextual factors. Describes sets of Encapsulated into experiences people Delivers a full 'intervention' – i.e., all Intervention design briefs: steps of a specific theory-of-change should have system necessary for having a psychological Functionality: what impact. experience should result?



- Constraints under which it must work
- Linkage to theory of change

**PSYCH:** Thinks in theories of change (based on what needs to happen)



Delivers (a set of) experiences, which have clearly defined 'psychological function', i.e., can serve as a part of a wider theory-of-change.

Delivers an interaction design element that can be used in many ways, within or outside of complex interventions.

## **Design innovation is possible at** different scopes



Novel intervention from existing components



Novel component that enables (a sketch of) one or more novel interventions

### **Scopes and design briefs are not just** about design and evaluation!



Critique of practices or directions in the field



Understanding lived experiences with

**Our framework describes HCI** + mental health contributions at different scopes. Design briefs at each of these scopes can support coordination within and across fields.

Linking technical innovation to the theories of change that describe psychosocial interventions,



Novel capability that enables (a sketch of) novel components ...and maybe interventions?



Novel capability that lets an existing intervention system work for more people, at lower cost, or more reliably

implemented interventions (or situations in which people may benefit from an intervention)

Design briefs for novel implementations, interventions, components, or capabilities.

Encouraging innovation, rather than strict replication of existing interventions and components, and

... ultimately balancing making new mental health interventions possible with making current mental health interventions better & available to more people.

our full

paper!

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