

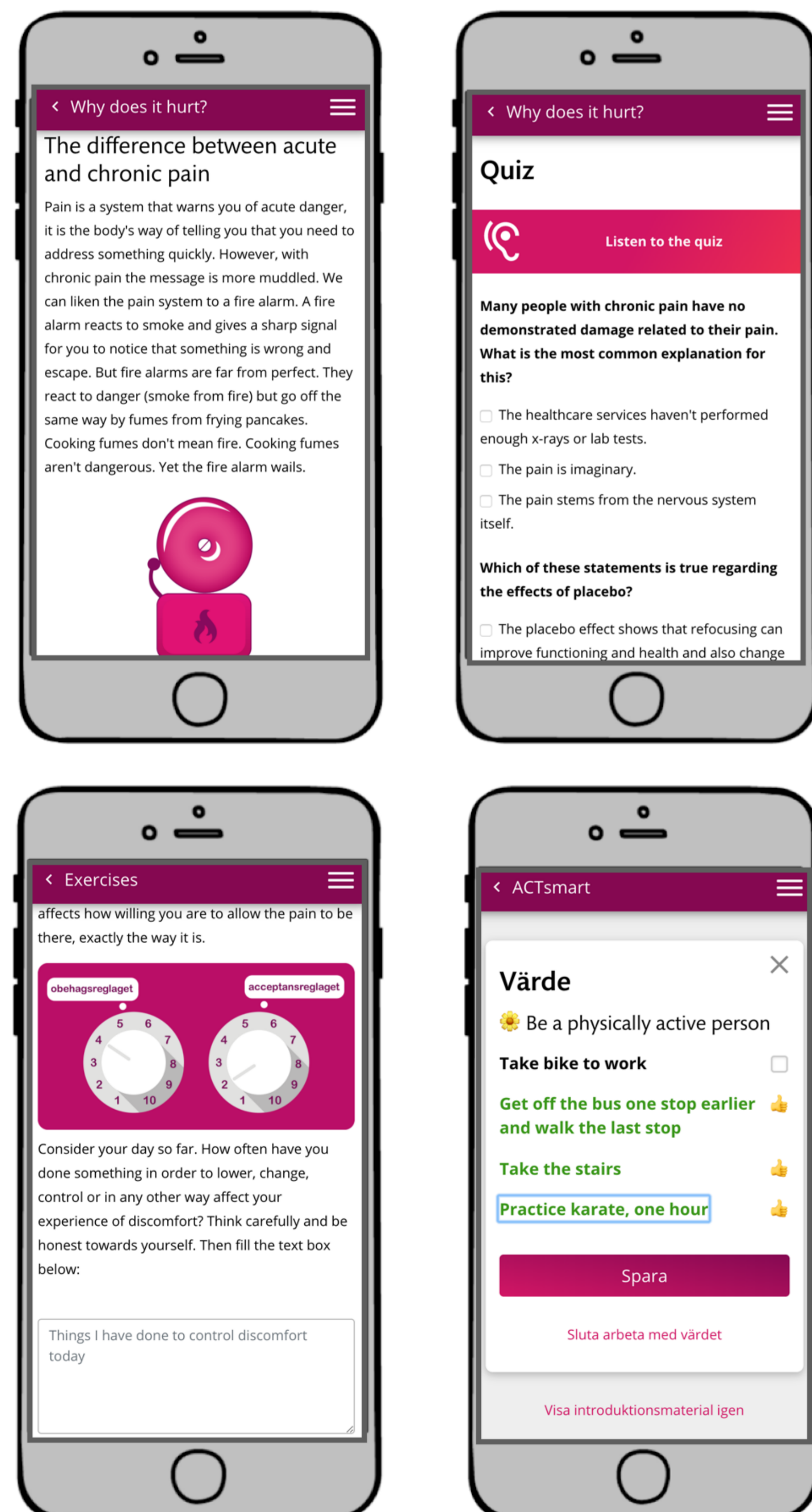
# Smartphone delivered ACT for adults with chronic pain – a feasibility study

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## Conclusions

Smartphone delivered Acceptance and Commitment Treatment (ACTsmart) for adults with chronic pain is feasible regarding acceptability, practicality and adaptation. A limited-efficacy evaluation shows promising results, warranting a large clinical trial.



Examples of the patient interface.

## Introduction

Chronic debilitating pain is common, and behavioral interventions aimed at improved self-management is a critical ingredient in effective treatment. Acceptance and Commitment Therapy (ACT) is a development within CBT with strong research support but availability is low. Smartphone based interventions may increase reach as well as effects, and more research is urgently needed.

## Objective

To assess the feasibility, including limited-efficacy, of ACTsmart in adults with chronic pain.

## Methods

N=34, 88 % women, age 25-57 (m=44.3), pain duration m=20.5 years

### The treatment

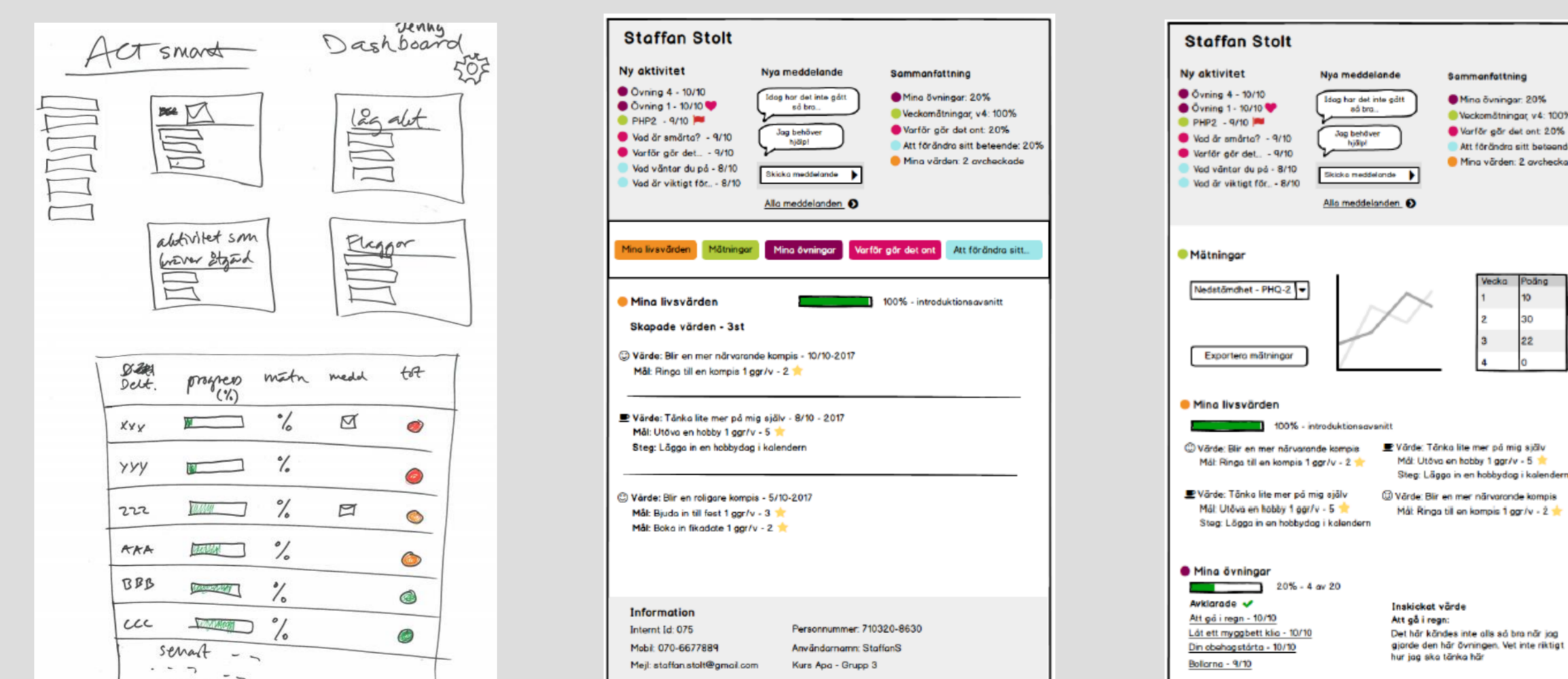
- therapist guided, lasted for 8 weeks, ACT protocol

### Feasibility

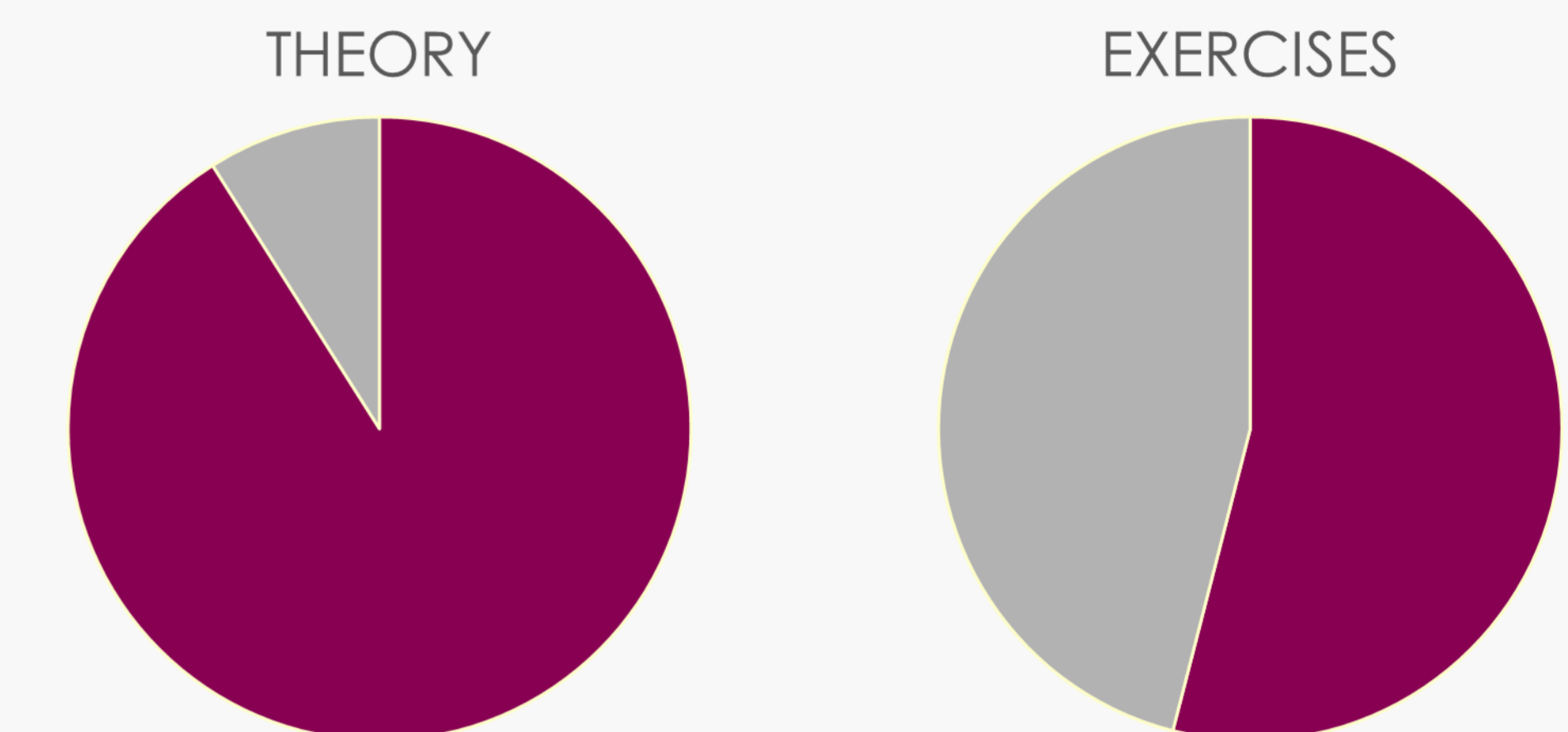
- acceptability, practicality, adaptation and limited efficacy (psychological (in)flexibility, pain interference, valued living, depression and anxiety), user experience (UX) interviews

### Data collection

- pretreatment, posttreatment and at 3-,6-, and 12-month follow up. Further analyses for linear mixed effects are planned.



Early sketches of the therapist interface, developed in UX-testing



Intervention content completion rate

## Results

### Acceptability

One participant discontinued treatment, and 3 participants did not start the treatment. For the remaining 30 participants treatment engagement was high. Completion rate: theory sections = 91.2 % (of 29 texts); exercises = 58.6 % (out of 29 exercises). Participants wrote on average 7.5 messages to their therapist seeking feedback.

### Practicality

The average time therapists spent on patients during the treatment was 127 minutes (range 17-254). Therapists texted the patients (outside the treatment platform) on average 1.94 times and made on average 0.94 phone calls.

### Adaptation

Although tentative, outcomes in this pilot study appear similar to what is seen in face-to-face treatment with a similar protocol, indicating the utility of the structure, content and format of ACTsmart.

### Limited-efficacy testing

Preliminary pre-post analyses indicate large improvements in pain interference (d = 1.10) and psychological inflexibility (d = 1.20), and moderate improvements in depression (d = 0.50), anxiety (d = 0.50) and quality of life (obstruction (d = 0.70) progress (d = 0.50)). Future studies should evaluate effects of ACTsmart in clinical trials, including comparisons with standard treatment.

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