

Ecological Momentary Assessment (EMA) App

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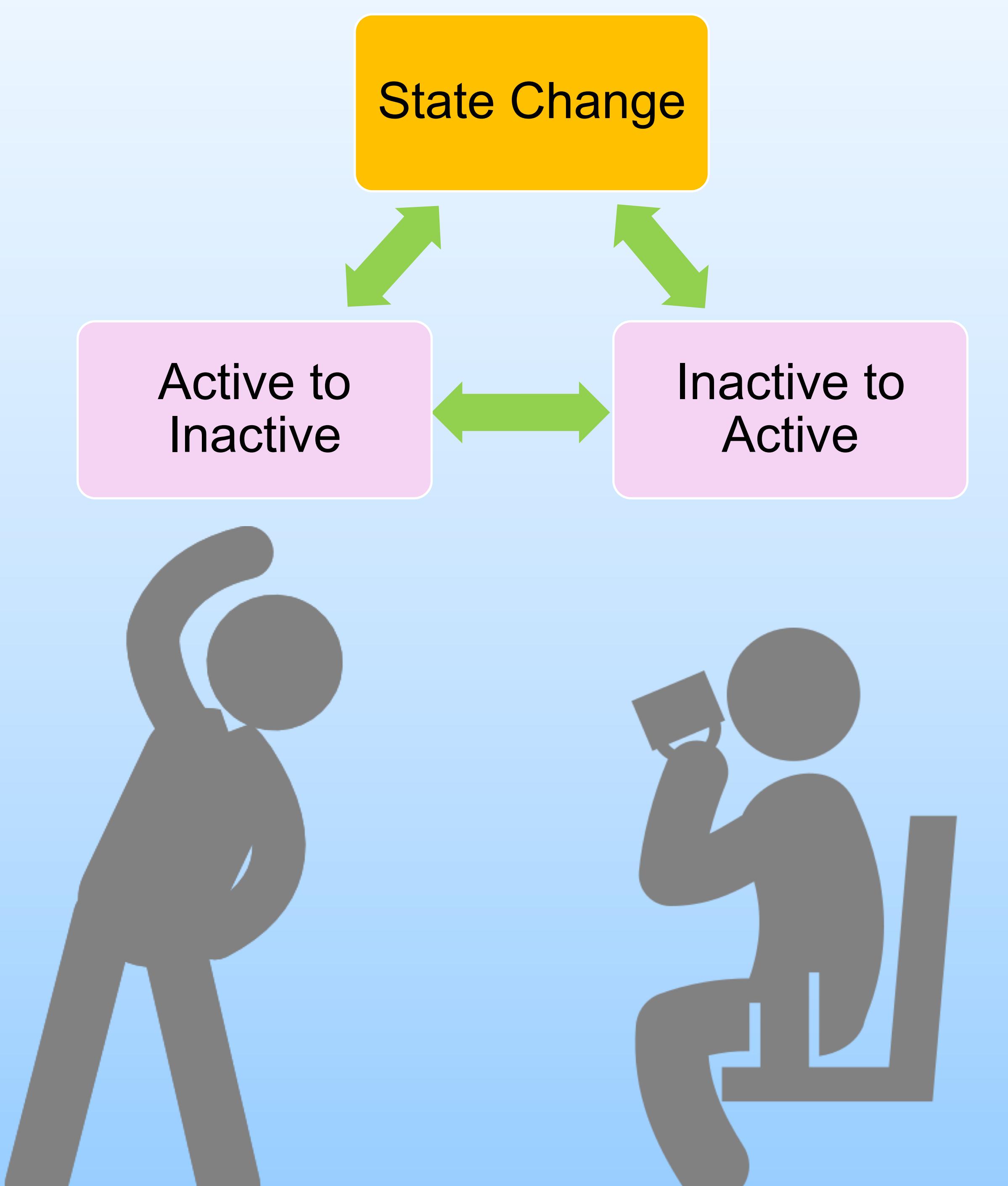
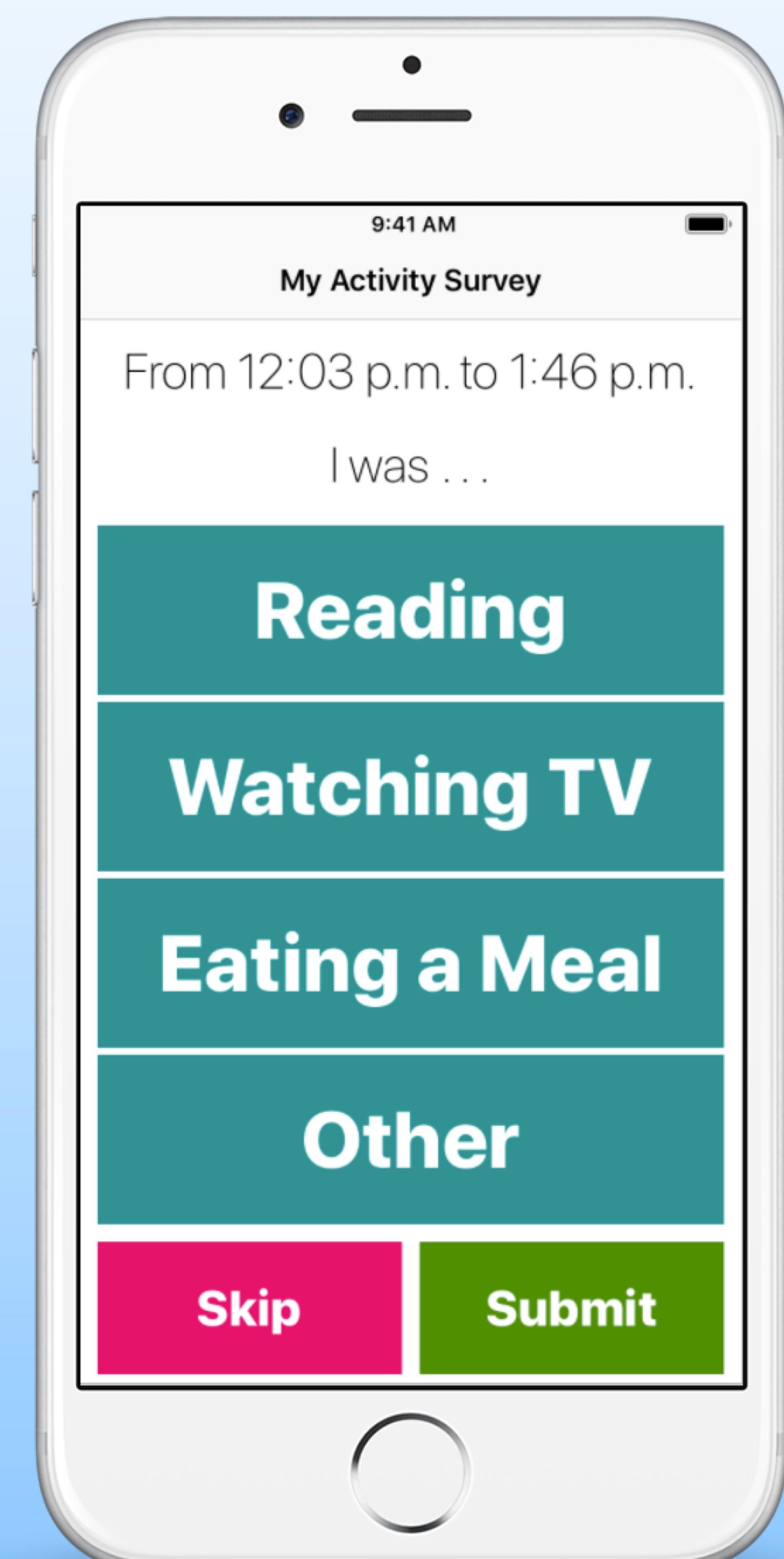
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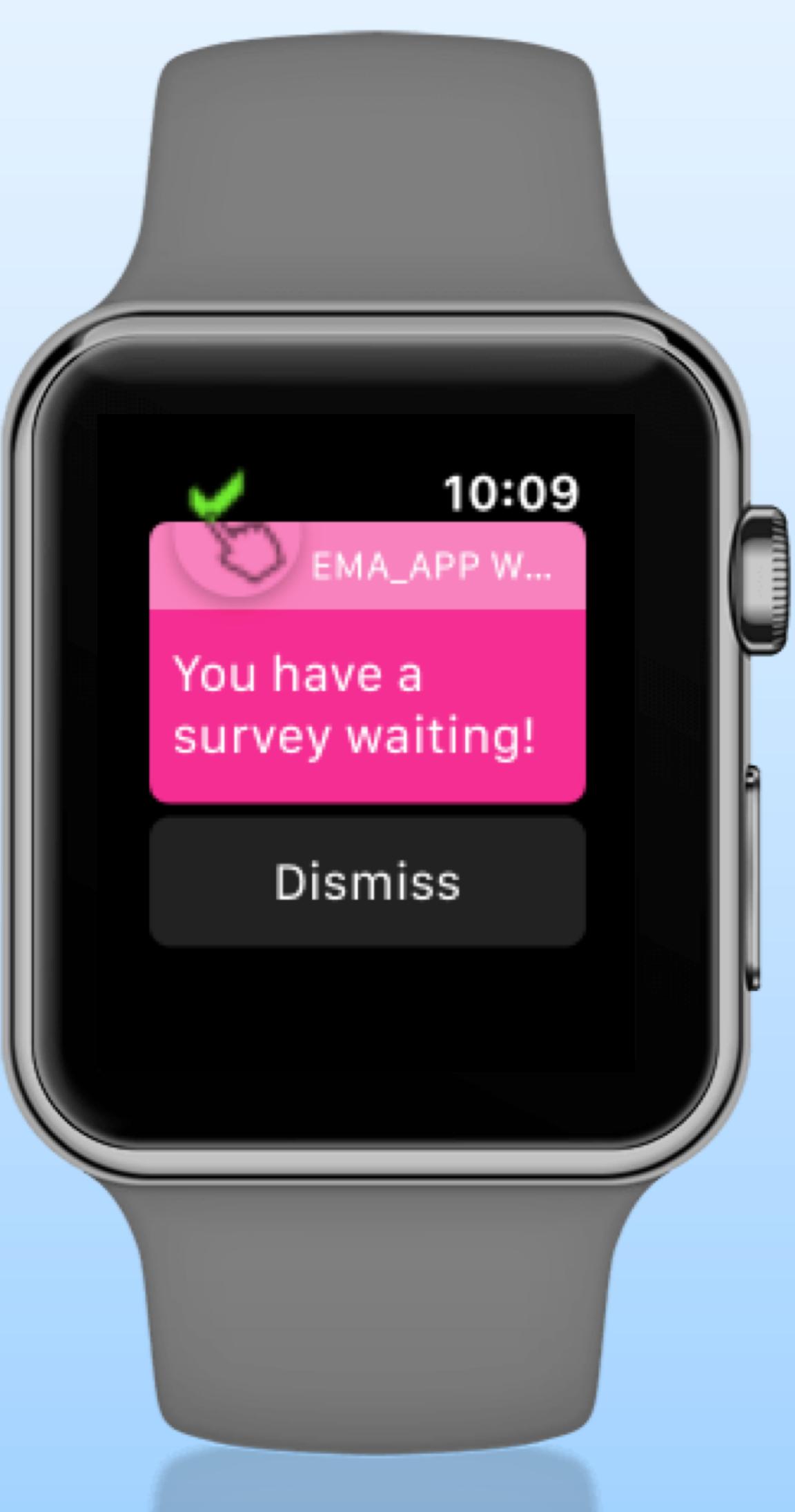
Claude D. Pepper OLDER AMERICANS
INDEPENDENCE CENTER (OAIC)

Project Goals

- Use wearable technology (Apple Watch) to identify individualized activity levels in people who have difficulty delivering accurate self-reports to their clinical team
- Use mobile and wearable technology (iPhone, Apple Watch) to allow users to respond to EMAs



The accelerometer in the watch is used to classify both activity and inactivity using a vector magnitude based algorithm



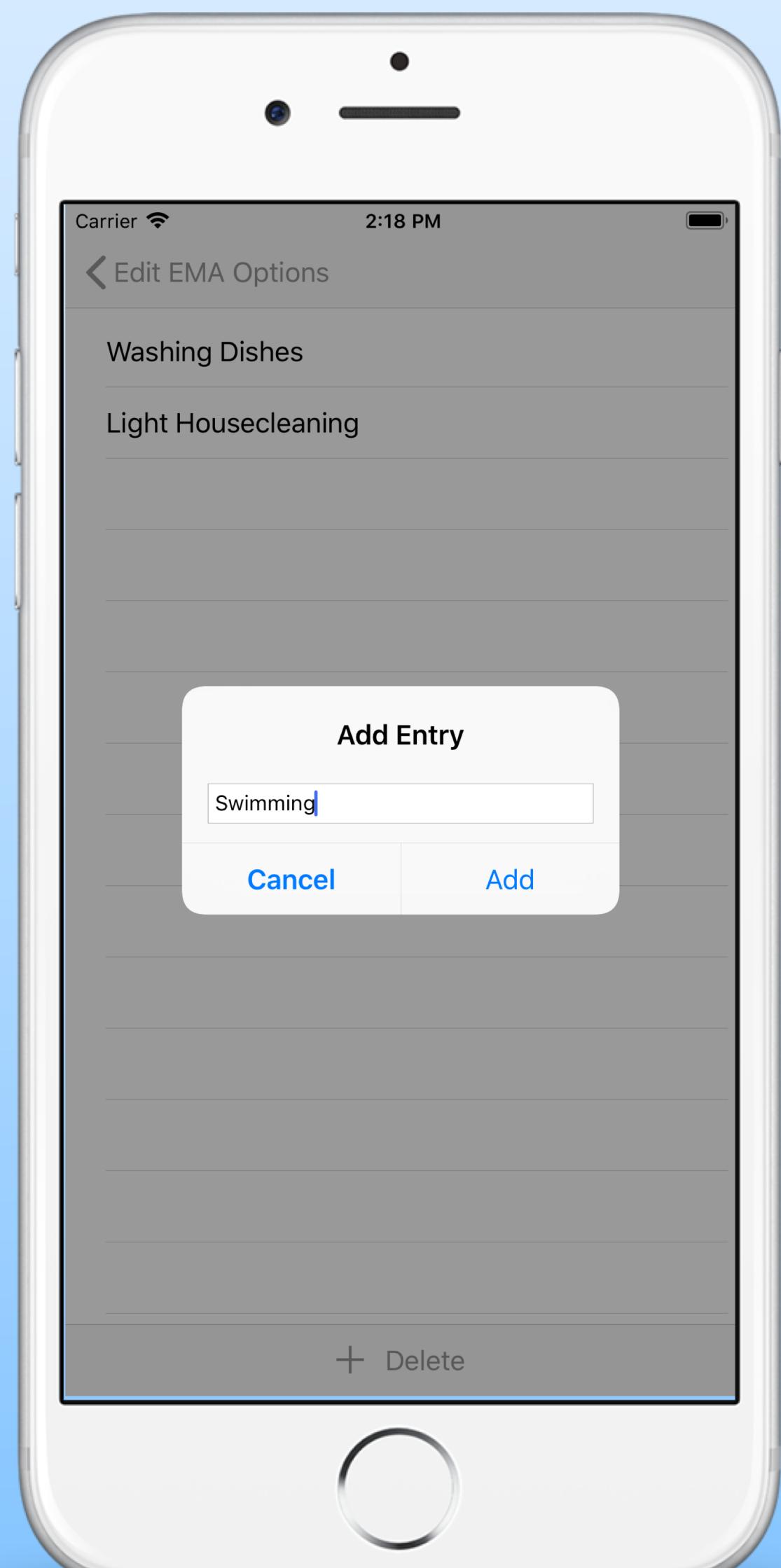
Features

- Modern IoT implementation of EMAs
- Sampling bias and user recall errors are reduced
- Presentation of EMA options are pertinent to user's state
- Response options are customizable for older adults or low-mobility users
- Surveys are triggered by real life events
- Convenient storage and collection of survey responses for further analysis

Clinician Customization

Clinicians can add survey options that are individualized for each patient. If the patient reports that they go swimming, the clinician can add swimming to the patient's activity survey.

Survey responses can be retrieved from the app on the phone so the clinician can compare results and analyze activity data by time, date and duration.



Additional Support

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Next Steps

- Test activity and inactivity tracking on a wide range of subjects to adjust sensitivity of motion detection
- Further app development
- Clinical research study with clinician/patient pairs