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## Motivation

Physical inactivity is a global epidemic

18

diseases & disorders

3/4

of Americans fall short of activity targets

5.3

million annual deaths globally

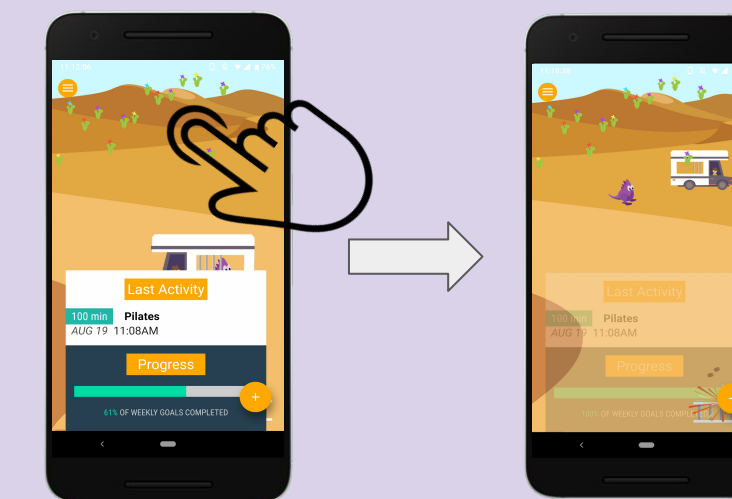
But most health interventions are confusing, demotivating, & unengaging (e.g., 33% of fitness trackers are abandoned by users after 3 months)

## Research Question

Can multiple chapter narratives drive long-term behavior change for physical activity?

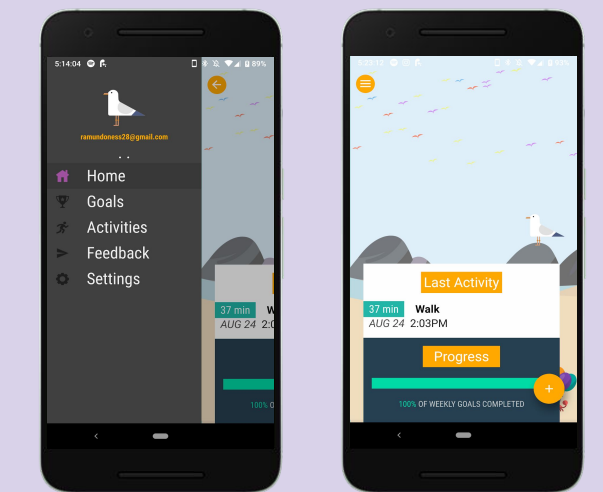
## Full Deployment (Summer 2019)

Developed new features



Added tap to hide activity dialog

Implemented non-narrative condition

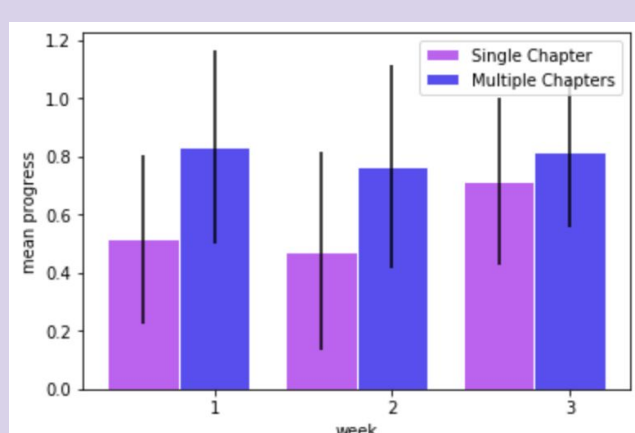


Improved tools for study monitoring

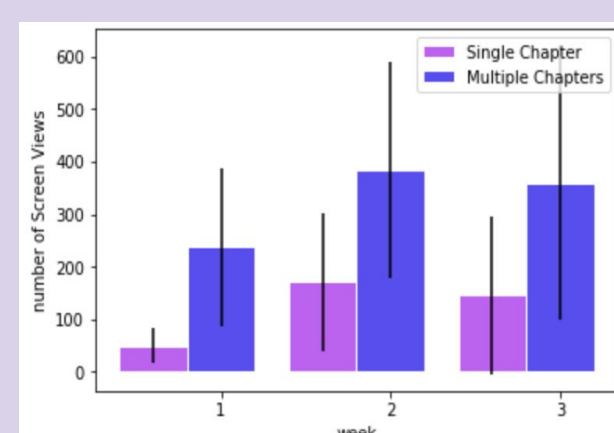
Zuki									
DATA DASHBOARD		REGISTER NEW USERS		ACCOUNT INFO		GET PHONE LIST		SETTINGS	
Assigned ID	First name	Last name	Email Address	Phone Number	Week	# Weeks in Study	LastActivityTime	LastUpdateTime	LastScreenView
Heath, Sam					20190818	1	08/18/2019, 10:00:00	08/18/2019, 10:00:00	App Sign In
Heath, Sam					20190818	1	08/18/2019, 10:00:00	08/18/2019, 10:00:00	Fragment exercise list
Heath, Sam					20190818	1	08/18/2019, 10:00:00	08/18/2019, 10:00:00	Fragment goal list
Heath, Sam					20190818	108	08/18/2019, 10:00:00	08/18/2019, 10:00:00	Fragment home
Heath, Sam					20190818	9	08/18/2019, 10:00:00	08/18/2019, 10:00:00	Fragment goal list
Heath, Sam					20190818	1	08/18/2019, 10:00:00	08/18/2019, 10:00:00	Fragment home
Heath, Sam					20190818	4	08/18/2019, 10:00:00	08/18/2019, 10:00:00	Fragment home
Heath, Sam					20190818	9	08/18/2019, 10:00:00	08/18/2019, 10:00:00	Fragment goal list

## Analysis from Pilot Study (Summer 2018)

- N=16, multi-chapter (narrative feedback) vs. single chapter (non-narrative) conditions
- Participants who got narrative feedback logged more activities, exhibited positive psychological shifts, and engaged more with the system
- But long-term, larger-sample study still needed, with controlled randomization to reduce bias



Progress towards weekly goals

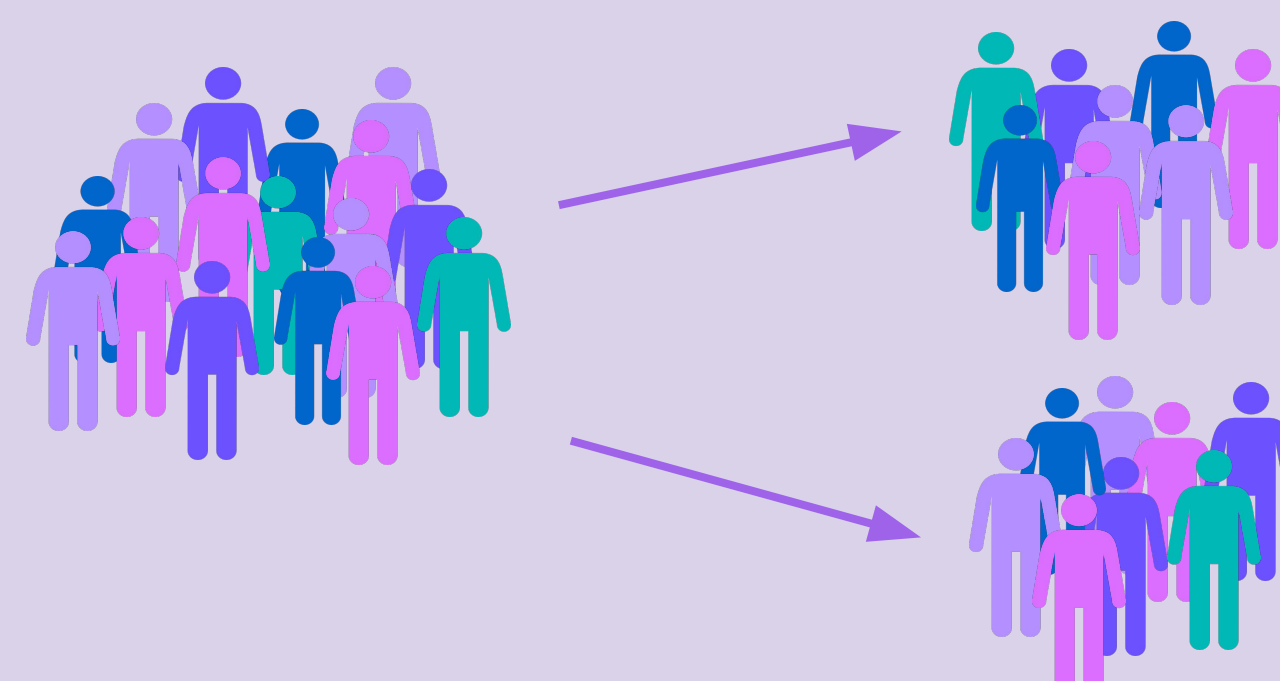


Engagement with the interface

## Criteria-Based Randomization

"Criteria-based randomization: Simple and exact control in multi-arm trials" (Baiocchi & Kizilcec)

Problem: Covariates affect results



Solution: Balance covariates across study conditions. 13 criteria: age, gender, baseline BMI, physical fitness, mindset, etc.

## Next Steps: Longitudinal Study

100 participants, 2 conditions (narrative vs. non-narrative)

16 week Study (13 chapters + 3 weeks for do-overs)

2 week Baseline

Offboarding (~2 weeks)



Acknowledgments: Special thanks to our mentor Dr. Elizabeth Murnane and Prof. James Landay