

# Engagement Model Redesign for Mahana Therapeutics

February 2023

# What Is Mahana IBS?

- 90-day digital therapy for IBS (irritable bowel syndrome)
- 10 sessions, 5-7 daily lessons each
- Based on CBT (cognitive-behavioral therapy)
- FDA-cleared
- Available by prescription

**Progress**

Your Mahana for IBS prescription will expire on **August 21, 2022** **25** days left

**PRACTICE**

- SESSION 1 **Symptoms & Stress** COMPLETED
- SESSION 2 **Managing Symptoms** COMPLETED
- SESSION 3 **Eating Patterns** COMPLETED
- SESSION 4 **Exercise Patterns** COMPLETED
- SESSION 5 **Unhelpful Thoughts**

**Bravo, {NAME}!**

Sending you a virtual high-five for all the work you've put in.

Remember, find your personal model diagram in your **Profile** at any time.

Next, we'll take a more in-depth look at your personal model and symptom

**Next**

**Session 2: Daily Symptom Diary**

Thursday, August 9

Mo	Tu	We	Today	Fr	Sa	Su
18	18	18	18	18	18	18

**Pain and Stress**

**Abdominal Pain**

**REFLECTION 1/3**

**Do you tend to act differently or change your behaviors when you experience a flare-up?**

For example, some people withdraw from aspects of their lives due to symptoms. While these behaviors might provide short-term relief, they don't always keep symptoms from returning.

**Causes**

- I have always had a sensitive stomach.

**Behaviors**

- I skip meals when I have symptoms.
- I avoid exercise when I have symptoms.
- I avoid social events.

**Emotions**

- Depressed
- Sad
- Anxious
- Scared
- Worried
- Embarrassed

**Stressors**

- Periods of emotional and social stress make my IBS symptoms worse.

**Thoughts**

- If I eat I will have to rush to the toilet.

# Context

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The **Engagement Model** project aimed to test the new way of presenting Mahana IBS program content to the users. It was grounded in user research and designed to make user experience more enjoyable, motivating and engaging.

After several rounds of concept testing and analyzing performance data, the team arrived at the new EM design featuring three key elements:

- A patient **'journey map'** designed to clearly communicate program journey in an easy to discover way
- A **"look into the daily lesson"** - a breakdown of key topics for the day intended to highlight the most interesting content in each lesson and create a satisfying sense of 'checking the box', a micro-motivator to engage.
- A **practice activity**, explicitly built into each day to boost their perceived importance and discoverability.

**My role:** I was brought into the Engagement Model work at this stage to help test the new iteration of the entire Phase 1 of the program - the new program layout populated with already existing content.

**Stakeholders:** Designer, Content Designer, Clinical Specialist, PM and VP of Product

# Case Study 1

## Diary Study

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### Engagement Model 2.0



# Problem

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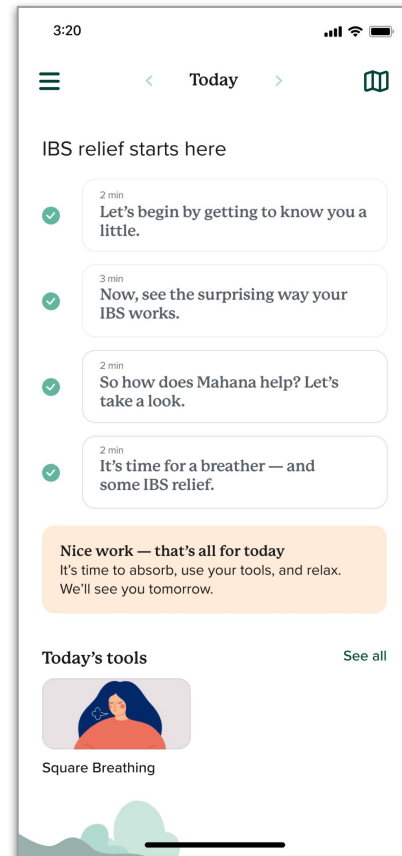
Previous research and tracking app's performance metrics over time helped the team identify several key problems that were a priority to solve to achieve higher retention:

- Unengaging content presentation in the app, with lots of uninterrupted reading
- Unclear time commitment for the patients
- Users tended to quickly lose track of where they were in the program, which negatively affected motivation

Having redesigned Phase 1 of the program, the team wanted to test their new approach to solving these issues.

# Research Goals

1. Test perceptions around the new design elements:
  - the journey map
  - daily task list
  - ‘activity of the day’
2. Uncover expectations around program pacing (30 days of content)
3. Compare motivation to engage at first encounter with the product and over time



# Project Kickoff



## Diary Study - Engagement Model 2.0

Last updated 13 Oct 2022

### Goals

- Assess whether users find the new experience enjoyable
- Assess if users understand how the daily model works and what's expected of them
- Test motivation to engage at first encounter with the product and over time
- Uncover areas for improvement
- Gauge expectations from the rest of the program

### Hypotheses underlying the new design

1. *If we clearly communicate program journey in an easy to discover way, and ground the user in where they are in the journey we will increase likelihood to engage and retain (phases journey)*
2. *If we focus user on core action(s) for any given day they will be more likely to complete those actions daily (task list)*
3. *If we create a "look into the daily lesson" (solve "operating in the dark" problem) and tease some of the content within the daily dose, user will be more likely to get to the part they might be interested in even if that means going through some other content first linearly (task list, exposing smaller content topics)*
4. *If we create a sense of "checking the box" on a micro level that will create some sense of satisfaction / gratification in the short term and will be a micro motivator to engage (task list, topics and day completion)*
5. *If we build in activities in the daily list explicitly, we can boost their perceived importance and discoverability (even if they stay optional / skippable)*

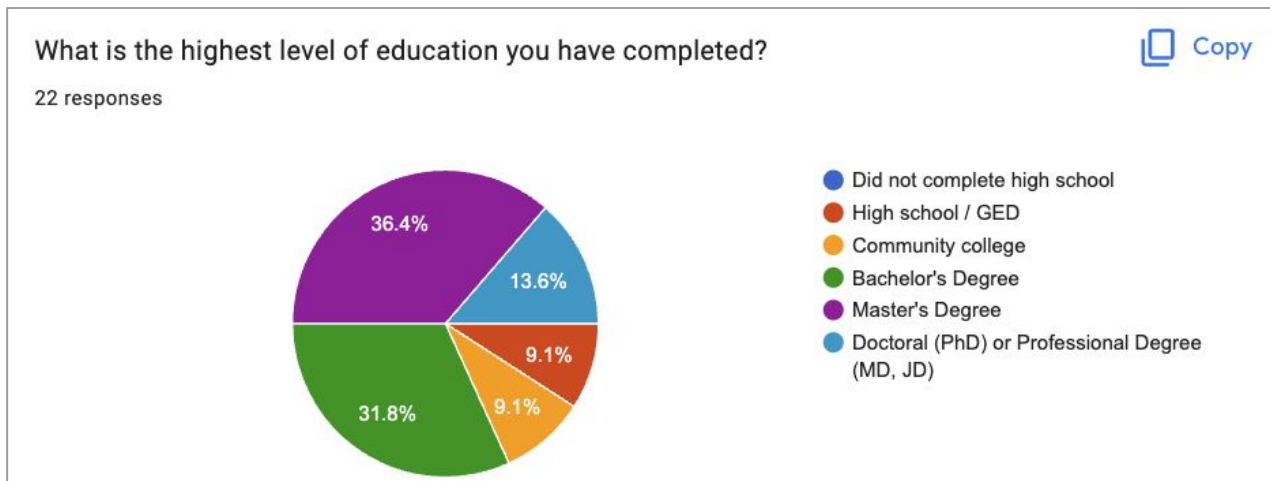
As a new researcher on this project, I started by arranging a series of meetings with its key stakeholders.

Conducting group and individual stakeholder interviews helped me to:

- understand the rationale underlying the new design, as well as technical constraints
- establish project goals
- identify and agree upon hypotheses and research questions
- set expectations for the research process, recruitment criteria and methodology.

# Study Setup

- 8 US-based participants recruited from Mahana's telehealth funnel
  - Age range: 24 - 68
  - Education: BA - MD
  - Previous Mahana users with an Rx
- **Stage 1:** 5-day diary study (daily surveys)
  - **Stage 2:** 6 exit interviews





# Diary Study

- A diary study felt best suited to our objectives due to the need to track participants' attitudes and motivation over time. It also allowed the participants to test our prototypes in their normal environment, and have the time to return richer, well thought-out feedback.
- I recruited 8 IBS patients (all past Mahana users) for a 5-day study. Every day, they were receiving a link to a lesson prototype and a 10-question survey detailing their experience with the program.

Section 2 of 2

Diary Study - Day 2

Description (optional)

Please describe your impressions from Day 2 of the program. \*

Long answer text

What did you think of the 'map' representation of IBS in the program's interface? \*

Long answer text

Please share with us your key takeaways from today's lesson. \*

Long answer text

What did you like about this lesson? \*

Long answer text

me any relief, but it  
t this app will actually  
me feel better.  
u can build your  
o your personal story  
n down menu were  
you think of th...

Aubrey Just enough Norman Just enough  
Kristen Just enough Savannah Just enough  
Jake Just enough Makenna Too little Bonnie  
Just enough Tiyana Just enough

Day 3 - How do you feel about t...

Norman I don't have any suggestions as I  
liked what was presented and how it was  
presented Savannah I think (similar to other  
lessons in the past) that we would benefit  
from having a specific place to log what  
activitv we want to be adding into our daily

Day 4 - What could be improved?

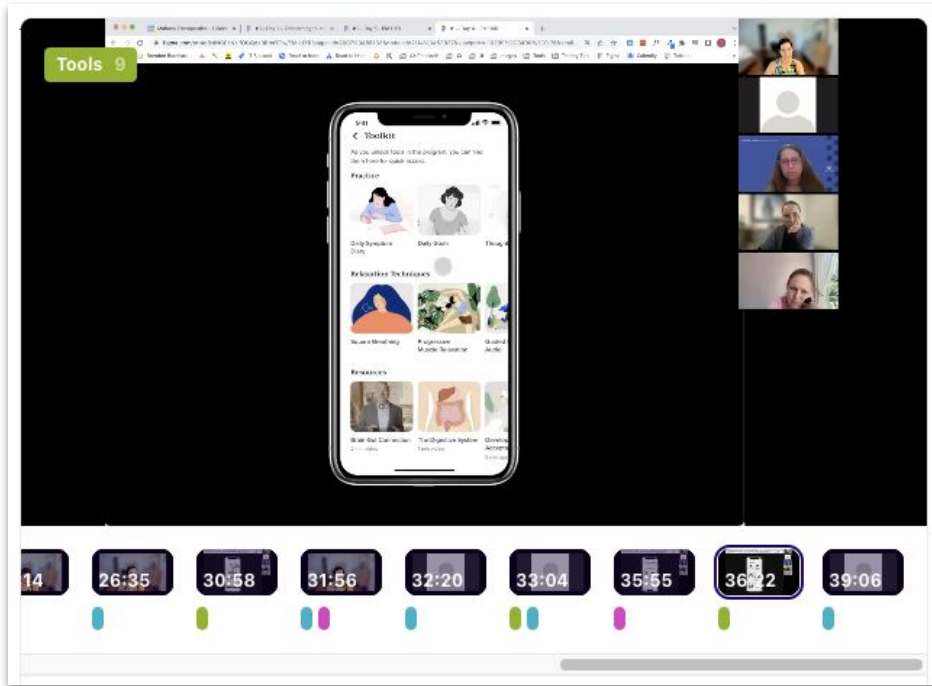
Enjoy something everyday Small enjoyment  
times often is better than big things such as  
long vacations Savannah There is strong  
evidence behind adding in an eniovable

Day 4 - Please share with us yo...

activities regularly Savannah I really liked  
the tip about scaling down the activity you  
want to add to your day. Sometimes I get  
ahead of myself and trv to plan large or

Day 4 - What did you like about ...

# Exit Interviews



- At the end of the study, I invited 6 most active and outspoken participants to meet with the team.
- They were asked to share their feedback on Phase 1 of the program and compare their impressions from the new design with its older version.

# Key Takeaways

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## New Design and Functionality

1. The journey map enhanced user experience by combining
  - a sense of direction
  - an overview of the program content
  - a playful aspect.
2. Users found the daily to-do lists convenient and appreciated transparency around timing.
3. The reading time in some submodules was not accurately estimated, with topics sometimes taking as much as 5 minutes to complete.
4. Gating was perceived as protection from information overwhelm and perfectionism, and a pause to reflect on the learnings.
  - some of the more severe patients found the forced pause frustrating.

# Key Takeaways

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## Content

1. Contrary to our assumption, the ‘personal model’ was seen as one of the most powerful and highly personalized aspects of the program.
2. Users saw psychoeducational content as a nice addition to practice activities, not the other way round.
3. Practical techniques gave users a sense of progress and hope for symptom improvement - they were essential for user satisfaction.
4. Symptom severity was another important factor determining how satisfied a user was at the end of a lesson. More severe patients felt like they needed to do more to alleviate their symptoms and didn’t appreciate being stopped by a hard gate.

# Outcomes

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1. A 100% study completion rate and quality participant feedback
2. Confirmed positive impact of the 'journey map' and new content submodules
3. Identified Day 4 as a key improvement area for Phase 1
4. Uncovered several key elements of a satisfying content 'recipe'
5. Two presentations and four 1:1 meetings with top management to demonstrate the findings and ultimately - evangelize the value of research



▶ 30:08

I thought this was a very well run study and I'd love to participate in the future.



▶ 40:54

You know, honestly, I really think you made it as simple and as easy of, you know, being a research participant as it could be. Like I have a full time schedule and

# Reflection

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- This project has once again highlighted for me **the importance of aligning stakeholders around the methods and recruitment criteria** for a research project before it begins. After the results have been published, one of the team members voiced concerns about recruiting past Mahana users for this study and the biases this created. We eventually agreed that the criteria we used allowed for unique research insights, which would have been impossible to obtain with new participants. However, going forward, I will try to better set expectations with key team members to avoid surprises.
- While working on this project, **I made a special emphasis on participant experience**. I strived to make my communication throughout the process clear, regular and timely, as well as to treat the patients with utmost respect and understanding of their delicate condition. The 100% study completion rate and excellent participant feedback showed me that this effort was appreciated. My strategy paid off, allowing us to build a panel of enthusiastic, high-quality research participants with a single study.

## Case Study 2

# Understanding Content Satisfaction

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Engagement Model 2.0

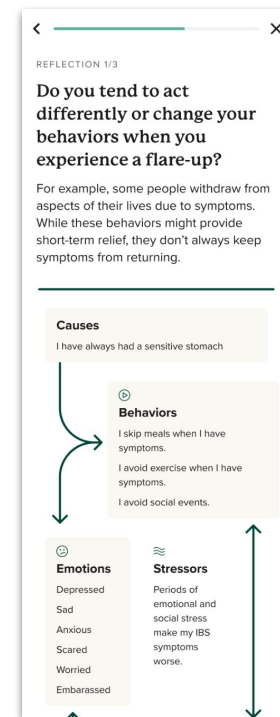


# Problem

- Day 4 emerged as the weakest link in Phase 1 of the program, which was bad for activation metrics
  - Most users called it uninformative and unsatisfying
  - Other data pointed in this direction as well
- We needed to move fast with the redesign to keep up with engineering progress.
- The team needed content design principles around satisfaction that were applicable to other lessons as well.

## Research questions:

- Which key ingredients should each lesson contain to optimize satisfaction?
  - Should we include more activities or learnings?
  - What other factors impact satisfaction?





# Approach & Study Setup

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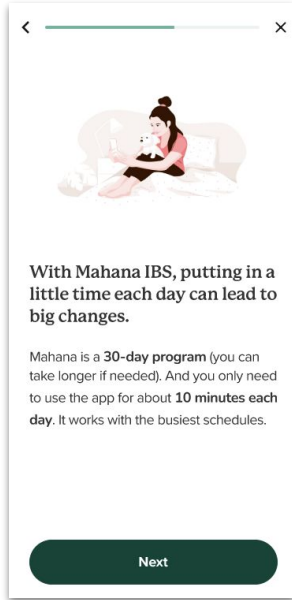
4 concepts developed in collaboration with the clinical team:

- baseline version of Day 4
- baseline + new learning
- baseline + new tool
- baseline + new learning + tool

## Setup:

- 4 groups of 30 IBS patients for quantitative effect
- All participants review an abridged version of the program (Days 1-3)
- Each group reviewed 1 concept, then rated it on a variety of satisfaction metrics
- The results were compared across 4 groups to observe patterns and reveal the best performing concept

# Test Structure: 6 Pilots



- Concept 1 (baseline)
- Concept 2
- Concept 3
- Concept 4



**EM 2.0 - Day 4 (Concept 1)**

\* 1. Please enter your UserTesting ID

\* 2. How would you rate your overall satisfaction with Day 4 of the program?

1 - Not satisfied at all      2      3      4      5      6      7 - Extremely satisfied

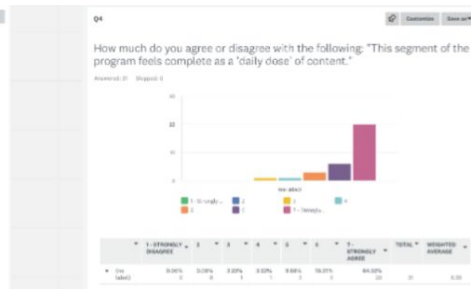
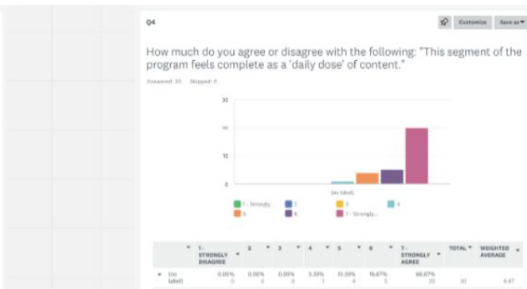
3. Please **verbally** explain your response (no need to type).

# Key Findings

- Unexpectedly, the response to all 4 concepts was mostly **extremely positive** (despite participants' typical aversion to extreme ratings) → The risk of going wrong was low.
- **Extra learning** and **extra learning + tool** performed best

## Quotes

*"I just want to say that this is one of the best surveys I've ever taken on UserTesting, and it's something that I deal with every single day of my life. I've never come across a prototype like this, so I'm really, really hoping that this isn't just for UserTesting and that this is actually coming out. If there's any way that I can be notified about when it would be coming out, I would be really, really grateful for that."*



# Satisfying Lesson Length and Composition

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- Practical techniques gave users a sense of progress and hope for symptom improvement - they were essential for user satisfaction.
- Users saw psychoeducational content as a nice addition to practice activities, not the other way round.
  - Assessments were perceived as activities

## Quotes

*“Focus on more of one thing - either getting to know the person's symptoms, teaching about CBT, or the breath technique. **All together it felt a little rushed and could have been more thorough.** Would have liked them spread over multiple days.”*

*“**I really really liked how short it is. I often give up on things because I feel overwhelmed by the sheer size of the task** (even if it's a good or fun one), but Mahana broke it down into very quick bite-sized pieces with clear boundaries.”*

*“I feel like it might be better to do **every other day or 3 times per week but with slightly more content on each day.**”*

*“I would guess it looks very similar in that there's quote unquote lecture content. There's a little bit of personalization to the lecture content. **There's some sort of technique video to learn and they're kind of clumped in that way.**”*

# Outcomes

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- This project helped derisk Phase 1 launch and gave the team a boost of confidence
- We have established value of an additional learning for the users, bringing the number of topics in each lesson to 4
- It has strengthened my nervous system as I had to correct study setup in UserTesting 6 times!