



PACIFY

Stress Management Voice Interface

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INFO 697 Conversational UX Design



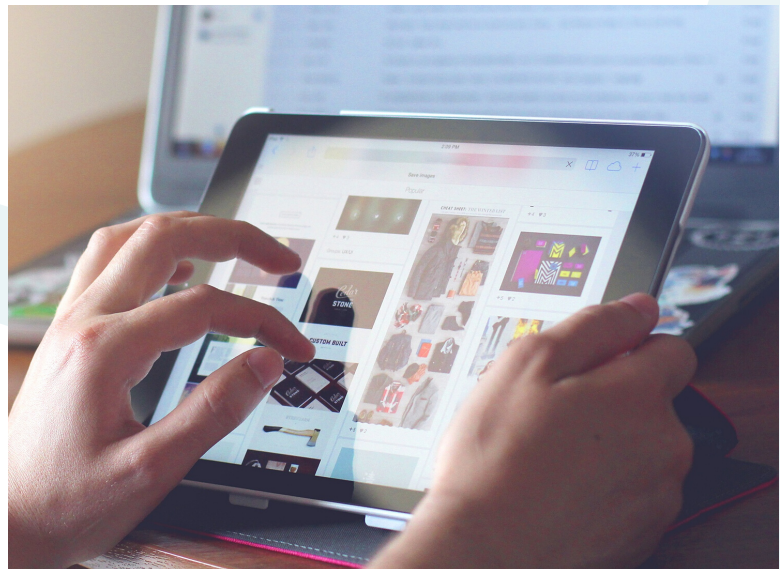
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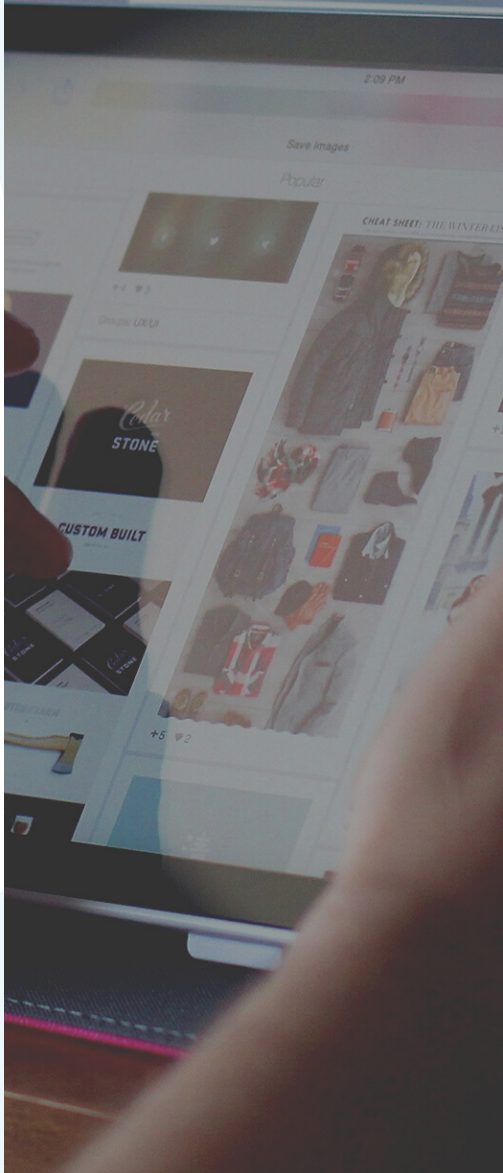
INTRODUCTION

Pacify is a stress management interface that monitors people's emotional health, helps users relax the mind and body, manage stress and anxiety on a daily basis. It will teach users how to train their minds for a healthier, happier, more enjoyable life. It also will help track their emotional states and provide suggestions.

"Pacify is a stress management interface that monitors people's emotional health"



USER RESEARCH METHOD SUMMARY



USER RESEARCH

" We conducted surveys and interviews to understand people's preferences for stress management techniques and their expectations of using a stress management bot "

We conducted surveys and interviews to understand people's preferences for stress management techniques and their expectations of using a stress management bot.

We had 5 survey questions and 5 interview questions. In total, we received 117 survey responses and had 6 interviews with our target users. In addition, we conducted market research and competitive analysis to gain a more comprehensive perspective of the target user group and understand the opportunities and challenges in the existing market.

USER SURVEY

The aim of the survey was to understand average stress level by participant's age, identify the most popular ways to relax when they feel stressed, their willingness to use voice apps to work with their mental health and prioritize the stress management techniques participants are interested in.

Survey Results

TOTAL 117 participants

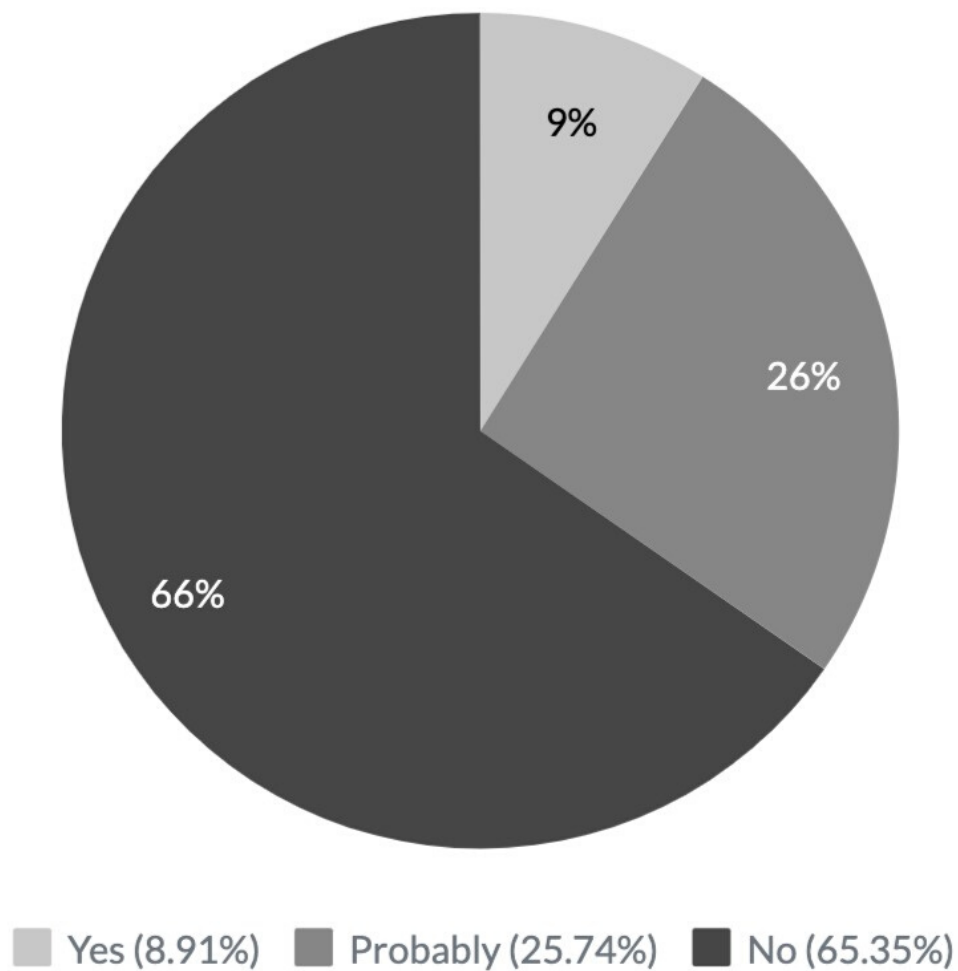
How often do you feel stressed?
Average stress level - 6.5 (overall)

TABLE 1. PARTICIPANTS' STRESS LEVEL BY AGE CATEGORY

Age y.o.	# of participant	Average stress level (10-points scale)
18-24	32	6.4
25-34	58	6.9
35-44	10	6.9
45-54	14	4.8
55+ y.o.	3	5.5

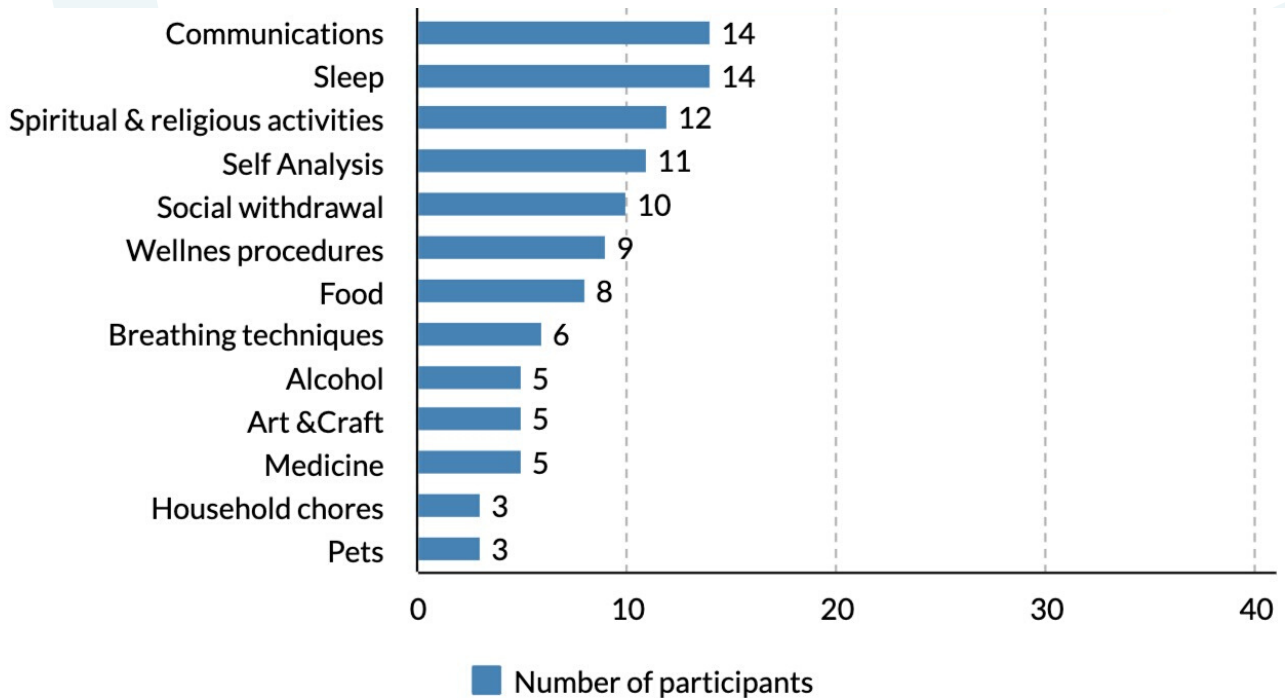
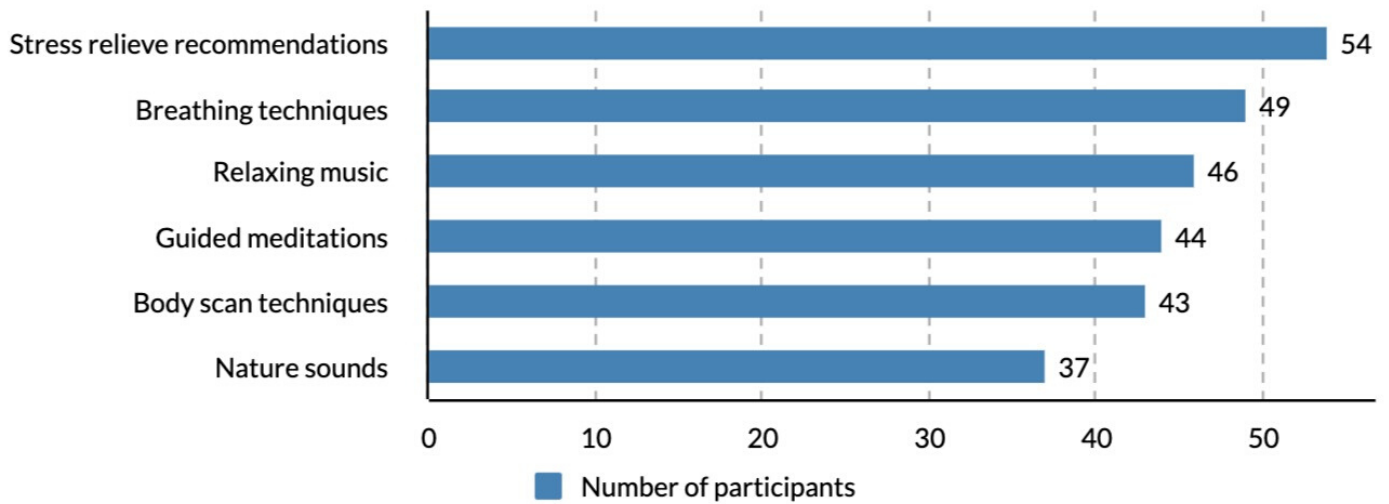
Survey Results

WOULD YOU CONSIDER USING VOICE APPS LIKE SIRI, ALEXA, GOOGLE ASSISTANT TO HELP WITH YOUR MENTAL HEALTH?



Survey Results

WHAT ARE THE BEST WAYS FOR YOU TO RELAX WHEN YOU FEEL STRESSED?



Additional ideas or thoughts from users about a voice assistant to help them for stress management.

"I would only want a guided meditation if the person leading the meditation had a relaxing voice. And I would only listen to sounds if the sound quality was really high "

- If I could program a voice assistant to recommend my preferred stress relievers and cycle through them for me, it may be useful. I'm not sure if I would want my assistant to offer me anything like meditation or guided exercises as if VA concerned about it recording that information and it being used for marketing purposes. I don't want my stress or anxiety to be for profit. That thought stresses me out more.
- Offer virtual exercise workout sessions.
- I would only want a guided meditation if the person leading the meditation had a relaxing voice. And I would only listen to sounds if the sound quality was really high.
- Guide the emotion to release in a positive way step by step
- Lockdown all social media apps for a while

Market Research

Market research was conducted to understand the existing market (who are the users and how are they dealing with the stress). In addition, we analyzed the top competitors in the field to gain a more comprehensive idea of our advantages and disadvantages.

MARKET RESEARCH METHODOLOGY

The following three questions that we want to understand for our market research:

- How large is the mental health market size? Does our stress management app have market potential?
- What are our competitors? What's our strength?
- What do the customers want for a voice assistant?

These questions are essential for our design decisions. The intents, the features, and the flows are considered based on our user' interview, survey, and market research. Firstly, we scan through all the recommended resources online. We've found two articles and one report which address the above three questions from reputable websites (Mental Health Market Size in USA 2020, These 10 Apps Can Make Managing Your Anxiety Easier, What Consumers Want in Voice App Design Report) Then we discussed all the potential insights during our meeting and decide our features which are able to implement into our design.

Findings

We've analyzed 6 of the most popular stress management applications of how they implemented the features to release the stress, the below features are some common features that we got inspired and implemented into our applications.

By analyzing these apps and users' feedback, we discovered that users enjoy apps that provide analysis and helpful feedback specific to the user's situation. In addition, users enjoy features that incorporate physical activities for relaxation.

Mental Health Market Size in USA 2020

LINK : <https://bit.ly/2ype15N>

\$17.8bn Mental Health & Substance Abuse Centers in the US Market Size in 2020

0.8% Mental Health & Substance Abuse Centers in the US Market Size Growth in 2020

2.9% Mental Health & Substance Abuse Centers in the US Annualized Market Size Growth 2015–2020

Stress Management App Market Competitive Analysis

LINK : <https://bit.ly/3b9eYME>

Pacifica (4.6 rating on google store)

- Ranked by Apple as one of its best mental-health apps of 2017
- The app provides space for you to track your moods, health, and habits, offering relaxation techniques and mindfulness exercises tailored to your specific needs.
- It also offers curated audio exercises to deploy if you are having a panic attack, are faced with a stressful moment at work, or even just stuck on the subway.

Moodpath (4.5 rating on google store)

- If you've been feeling sad, stressed, or lethargic, Mood Path will analyze the duration and severity of your symptoms to suggest whether you might be suffering from depression.

Talklife (4.4 rating on google store)

- TalkLife, which calls itself "your place to talk to people who get you,"
- Conversations are carefully monitored and users are encouraged to ask questions, chronicle their struggles, and offer tips anonymously or by name.

Happify (3.6 rating on google store)

- Ask questions and determine which " track " you should follow
- Assign you daily quizzes and activities to help you achieve your goal of your track

Brain.fm (3.6 rating on google store)

- Choose the desired outcome - focus, meditation, relaxation, nap, nighttime sleep
- provide music to influence cognitive states

ALEXA SKILLS ANALYSIS

Alexa stress management voice apps

- Stress Management Tips
- Relieve My Stress
- Rain Sounds
- Sleep Sounds
- Guided Meditation
- Headspace
- Deep Breath

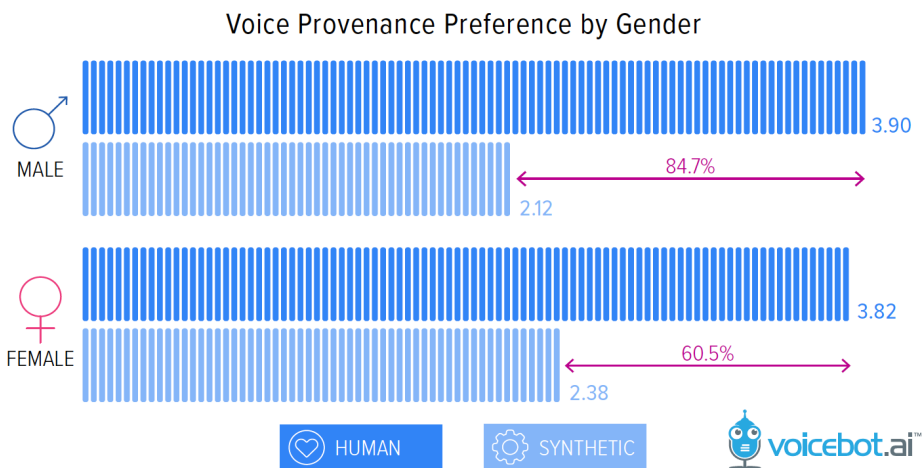
Findings

We also tested most of the existing Alexa's relaxation and stress management skills to figure out its limitations and create better solutions for our voice interface.

Functionality almost all of them were limited with only one feature. As a result of the analysis, we aimed to incorporate multiple features within one skill and provide users with different options to relieve their stress.

What do consumers want in voice app design?

Link: <https://bit.ly/2SHk5NX>



FEMALE VS MALE VOICE

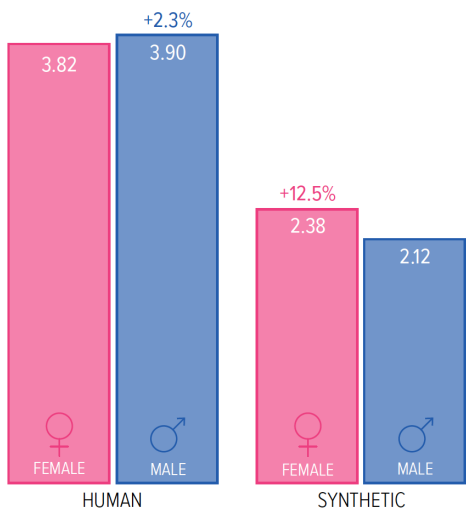
The study discovered a similar preference for female voices when they are synthetic. But there is a wrinkle in this story. The first preference that we can see is the disparity between male human and synthetic voices compared to female human and synthetic voices. Male human voices were preferred by evaluators over synthetic by a margin of 84.7% while female human voices were preferred at a rate of 60.5%.

Talk Space matches users with licensed therapists in their area almost instantly. Simply download the app, complete a matching questionnaire, select a therapist, and choose a weekly payment plan.

What do consumers want in voice app design?

Link: <https://bit.ly/2SHk5NX>

Gender Preference for Voice Assistant Personas



HUMAN VS SYNTHETIC VOICE

There will always be a degree of subjectivity when assessing human preferences for things that are not all exactly alike. There are no two human or synthetic voices that are truly identical so subjective preferences can creep into the data. It is logical to argue that for human voices, that male and female are so close that for a sample of 240 it is within the margin of error. However, you would also acknowledge using this same logic the preference for female voices when both are synthetic is well outside the margin of error.

INTERVIEW

INTERVIEW QUESTIONS

- When was the last time you felt anxious? What did you do to relieve your stress? How did it go?
- When you feel stressed in life, who do you want to talk to / seek help from? Why?
- Have you ever used any stress-management app? How do you like it? Why?
- If you're using a voice stress management app, what kind of features are you most likely to use? Why / Why not?
- Ex: Guided meditations/breathing/exercises; Movies and literature suggestions / Resources suggestions (counseling); Track user emotional state / stress & anxiety assessment
- Can you describe the ideal stress management voice app for you? Ex: personality (polite, professional, friendly), tones (casual, professional); if it has a gender?
- Additional comments?

INTERVIEW FINDINGS

Users prefer an experienced and friendly adviser as a persona for the stress management app. Users interested in personalized experience based on their current circumstances. Users don't expect the interface to behave like a human, but more of a helpful tool. Users prefer to avoid words such as 'Stress', 'Stressed', 'Anxiety', 'Distressing', 'Tense' etc while working on their mental health.

Persona & Word Choice

BENCHMARKS

- Knowledgeable. The interface will use scientific methods to access the user's mental states and provide suggestions for stress management and stress relief.
- Personalized. The interface will provide an individual approach based on the user needs. It will help to understand the stress level to provide the most effective recommendations.
- Natural and conversational. The interface will serve as a experienced adviser helping to treat many kinds of stress-related problems so it should be person-like conversational interface
- Context aware. The interface will be able to keep track of changes in user mental health to provide the user with the most relevant recommendations based on identifying the improvements.

Persona & Word Choice

LEVEL OF PERSONIFICATION

A stress management interface will present a medium personification level to build user trust. It must be perceived as a credible resource, such as a psychologist. The users should feel comfortable sharing their personal information with the interface. It should be perceived as intelligent and capable, that users trust it to understand, analyze and empathize with their emotions. It should be compassionate, but not overly emotional.

POWER DYNAMICS

What is the power dynamic in the conversation?

The system will lead the conversation based on user responses.

How intimate does this relationship need to be?

Relations need to be intimate and trusting enough to work productively on user problems. The user should trust the interface to share his feelings.

Where are these two entities in their journey together? How will their relationship change over time?

In the beginning, the interface acts as a guide to introduce users to stress management and stress relief methods. As time goes by, the relationship develops into partnership to enhance the user's ability to manage difficult emotions and relieve stress levels.

Persona & Word Choice

TONE

Warmth and calmness are the most important tone characteristics for the stress management interface. The tone also will be friendly, supportive and informative.

CHARACTER TRAITS

- empathetic
- attentive
- mindful
- trustworthy
- helpful intelligent

VOICE & WORD CHOICES

The voice interface will speak slowly to allow the listener to hear every word it says, add some pauses to let the user keep up with it and naturally slow down. It will have a soft voice to make users feel comfortable and create a desire to engage with it. It is a tone that carries no sense of aggression, tension, strain or anxiety; rather, it is open, warm and caring, giving others a clear impression that the speaker is comfortable talking with other people. The interface will use casual words without any slang, terms or jargon.

Persona & Word Choice

TASKS

On boarding for first-time users and returning users

Assess and track users emotional states

Guided practices

Entertainment suggestions

SAMPLE SCRIPTS

First-time user greetings & stress assessment

Bot: Welcome to Pacify. Whenever you need to find peace of mind, I'm here for you. I can help you with guided exercises, entertainment recommendations or track your emotions. Ready to set up your profile?

User: Yes

Bot: Great. If you don't want to answer any of the questions, feel free to say "skip". To start with, what's your name?

User: My name is Micheal.

Bot: Nice to meet you Michael. How old are you?

User: I'm 25.

Bot: Alright. Are you working with a mental health professional?

User: No.

Bot: Thanks for the information. I'll use the information to customize your experience and nobody can access your data except you. Do you want to start with a simple quiz to check in with your feelings?

User: Yes

Bot: Great. From 1 to 5, 1 being awful, 5 being great. Please rate how you feel this week.

User: 4 Bot: I'm glad you had a good week. Did you experience any of the symptoms this week : headache, lack of sleep, chest pain, muscle tension?

User: No

SAMPLE SCRIPTS

First-time user greetings & stress assessment

Bot: Great! From 1 to 5, 1 being rarely, 5 being very often. How often did you feel depressed, bored or angry this week?

User: 2

Bot: Nice. From 1 to 5, 1 being rarely, 5 being very often. How often did you socialize with people this week?

User: 4 Bot: Ok. Do you find it difficult to focus on tasks or stay motivated?

User: Yes

Bot: You've completed your first check-in! Based on your answers, your stress level is medium. An appropriate amount of social activities can help you relax however too much social activities may cause stress or distraction. Would you like to continue the session today?

User: No

Bot: Alright. Good start, hope to see you tomorrow!

SAMPLE SCRIPTS

Returning user greetings & entertainment suggestions

Bot (to Return User): Nice to see you again, [user name]. Let's take a moment to focus on you and your well-being. How would you like to start our session today? You can say: guided exercise, entertainment recommendation or track your emotions

User: Entertainment

Bot: Great. Are you in the mood for music, movies or literature?

User: Music

Bot: Alright. Do you want to hear instrumental music or nature music?

User: Instrumental

Bot: Ok, I found a song called "Kiss the Rain" by pianist Yiruma. Would you like to play it now?

User: Yes

Bot: (Play music)

Bot (when music finishes): Would you like to continue, go back to the main menu or exit?

User: Exit.

Bot: Alright. Have a good day, see you next time!

SAMPLE SCRIPTS

Returning user greetings & guided exercise

Bot (to Return User): Nice to see you again, Micheal. Let's take a moment to focus on you and your well-being. How would you like to start our session today? You can say: guided exercises, entertainment recommendation or emotion assessment.

User: I want to try guided exercises. Bot: Good choice, exercise can increase your overall health and your sense of well-being! I can help you with guided meditation, yoga and breathing techniques. What do you want to try now?

User: I want to practice yoga.

Bot: Nice. Do you want to focus on flexibility or strength? User: Flexibility sounds good.

Bot: Alright. How long would you like to exercise? You can say something like 20 minutes.

User: I think 10 minutes is good. Bot: Great, there is a 10 minutes stretching yoga with our yoga instructor Jessica. She will take you from here. Would you like to start now?

User: Yes. Bot: Alright. Feel free to say "stop" at any moment when you need to. Enjoy your yoga! (playing stretching yoga)

SAMPLE SCRIPTS

Returning user greetings & guided exercise

User: I want to stop now. Bot: I heard "stop". Would you like to go back to the main menu, continue the practice or exit?

User: I want to exit. Bot: Alright. You did a very good job today, hope you're feeling better. See you again soon!

Error message: Sorry, I didn't get it. Please say it again.

USABILITY TESTING

Usability Testing Links

First-Time User On boarding & Stress

Assessment:<https://app.botmock.com/t/wngNeoa4Mz138>

Guided Exercise:<https://app.botmock.com/t/qGO40PE4V777>

Entertainment Recommendation:<https://app.botmock.com/t/BOEvK29Noj105>

Questions

- To your point of view, was the interaction successful? (Could you complete the task, or did it help you have a better understanding of your stress level or manage your stress?)
- What was positive?
- What was challenging or confusing?
- How would you describe the chatbot's personality ?
- Would you use this chatbot? Why or why not?

Findings from Usability Testing

- The tone of the bot makes the participants feel distant. Participants expect a more warm and friendly tone.
- For the on-boarding process, participants are confused and hesitant about providing personal information such as age and if they're working with medical professionals.
- Participants feel erupted when transitioning from the bot to music or guided exercise because of different voices or background music.
- Participants expect a smooth hand-off in between. Participants are confused about some terms such as "guided practice".
- Participants hope to be able to assess the menu at any time and be reminded of the menu options whenever they need to make a choice, such as to continue the session.

PROTOTYPE

PROTOTYPE LINK



APPENDIX

DEVELOPMENT

INTERACTION MODEL

PROMPTS LIST

FLOW DIAGRAM

SURVEY RESULTS

SURVEY

SURVEY RESPONSES

INTERVIEW RESULTS

INTERVIEW NOTE

PROTOTYPE

PROTOTYPE