



## CS 435 Human-Computer Interaction

### Project Task 4

#### Agent Based Interface

Gangaram Siddam - 22210014  
Tanmay Somkuwar - 23210112  
Poornima Bhatia - 23210073  
Ananya Verma - 23510010

We created the TranquilMind website which is used for monitoring the mental health of users. It is a website designed to support mental well-being by providing personalized exercises and suggestions based on user input. Through a user-friendly interface, users can register, answer questions related to their state of mind, and receive tailored recommendations for mental health exercises, breathing techniques, and physical activities. The project aims to promote stress management, emotional resilience, and overall mental wellness through accessible and targeted resources.

Link to the website - <https://gangaramsiddam.github.io/Tranqilmind.github.io/>

### **Importance of Prototyping:**

Prototyping plays a crucial role in the development of the project TranquilMind for several reasons:

1. **Visualization:** Prototyping allows stakeholders to visualize the project early in the development process. For TranquilMind, this meant being able to see how the website would look and function before investing significant resources into full-scale development.
2. **User Feedback:** Prototypes facilitate user testing and feedback gathering. In the case of TranquilMind, testing the prototype with potential users helped identify usability issues, gather user preferences, and make informed design decisions.
3. **Iterative Development:** Prototyping supports an iterative development process. TranquilMind's prototype allowed for iterative improvements based on user feedback, leading to a more refined and user-centric final product.
4. **Risk Mitigation:** Developing a prototype helps mitigate risks associated with full-scale development. By identifying potential technical challenges, usability hurdles, or conceptual flaws early on, we were able to address the issues before they become costly to fix.
5. **Communication:** Prototypes act as communication aids, aiding in the alignment of understanding regarding the project's vision and fostering collaboration and support throughout TranquilMind's development journey.

### **Evaluation Process:-**

We have evaluated our model using the following technique:-

#### **Cognitive Walkthrough**

A cognitive walkthrough is a task-based usability-inspection method that involves a cross functional team of reviewers walking through each step of a task flow and answering a set of prescribed questions, with the goal of identifying those aspects of the interface that could be challenging to new users.

In the context of TranquilMind, a cognitive walkthrough would involve a systematic evaluation of the website's user interface and functionality from the perspective of a new user. The goal is to

identify potential challenges or areas of confusion that users may encounter when registering, answering questions, and receiving suggestions for mental health exercises, breathing techniques, and physical activities.

To understand the users perspective we created a questionnaire. The questionnaire consisted of the following questions:

1. What is your age?
2. What is your gender?
3. Is it clear how to register on TranquilMind?
4. Are the registration form fields labeled appropriately?
5. Can users easily navigate through the questionnaire process?
6. Do the questions in the questionnaire cover a comprehensive range of factors related to mental health?
7. Does the system accurately interpret user responses to provide relevant suggestions?
8. Are mental health exercises, breathing exercises, and physical exercises easily accessible?
9. Do users receive clear instructions on how to perform these exercises?
10. How long do you typically spend on TranquilMind per visit?
11. How satisfied are you with your experience using TranquilMind?
12. How likely are you to recommend TranquilMind to a friend or colleague?
13. Are the features and functionalities of TranquilMind clear and intuitive?
14. How easy is it to navigate TranquilMind?
15. Are the breathing exercises and yoga techniques provided by TranquilMind helpful?
16. What aspects of TranquilMind do you think could be improved?
17. What do you like most about TranquilMind?
18. Do you encounter any difficulties or frustrations while using TranquilMind?

Based on the above questions we identified a few challenges.

### **Challenges:-**

#### **1. Clarity and Navigation:**

Users find it difficult to understand how to register on TranquilMind.

Some users complained that the navigation through the questionnaire is difficult.

#### **2. Lack of comprehensiveness**

Users complained about the questionnaire that it did not cover a comprehensive range of factors related to mental health, leading to incomplete or inaccurate assessments of their state of mind.

#### **3. Suggestions**

Users said that the breathing exercise can have better suggestions for mental health exercises.

#### **4. Lack of feedback**

Some users suggested providing feedback based on which changes in the system can be made.

#### **Recommendations:-**

##### **1. Clarity and Navigation:**

- a.** Based on the users response the registration process can be improved making it more user friendly and more intuitive.
- b.** We can also enhance the navigation through the questionnaire by simplifying the flow of questions, providing visual cues or progress indicators.

##### **2. Lack of comprehensiveness:**

- a.** We can expand the questionnaire to cover a more comprehensive range of factors related to mental health. Include questions that address various aspects such as emotional well-being, stress levels, coping mechanisms, and social support.
- b.** We can ensure that the questionnaire is designed to gather detailed and accurate information for a more thorough assessment of the user's state of mind.

##### **3. Suggestions for Breathing Exercises and Mental Health Exercises:**

- a.** We can Improve the suggestions for breathing exercises by providing a wider range of techniques tailored to different mental health needs. Include guidance on when and how to practice these exercises effectively.
- b.** We can also enhance the selection of mental health exercises by offering a diverse set of activities that target specific areas such as mindfulness, relaxation, stress reduction, and emotional regulation.

##### **4. User feedback and iterative improvements:**

- a.** We can make changes such as encouraging users to provide feedback on their experiences with TranquilMind, including suggestions for improvement.
- b.** We can also regularly review user feedback and iterate on the platform based on user suggestions and preferences.

#### **Overview of the Questionnaire:**

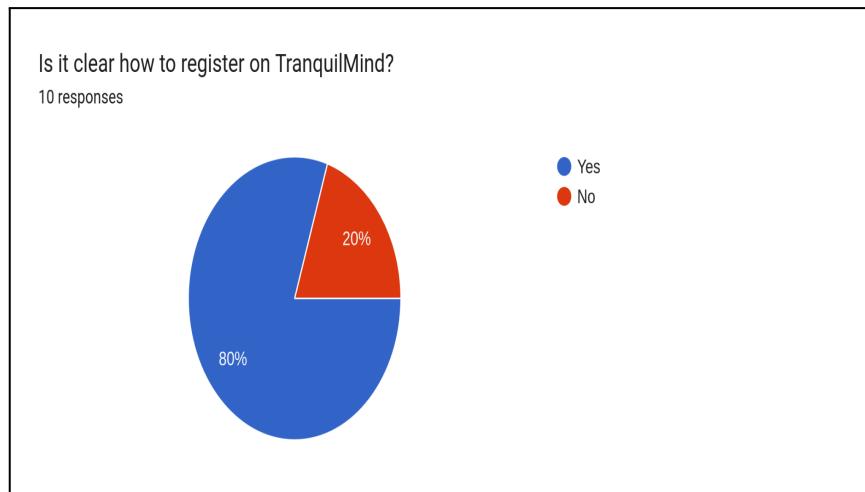
User feedback played a pivotal role in enhancing TranquilMind's website. Through user testing and feedback gathering, we gained valuable insights into users' experiences, preferences, and challenges. This feedback guided us in making iterative improvements to the website's design, functionality, and content. For example, users highlighted difficulties in navigating the questionnaire and suggested improvements in the clarity of registration instructions. Based on this feedback, we refined the user interface, simplified the registration process, and optimized the questionnaire flow for better user engagement. Additionally, users expressed a desire for more diverse and tailored mental health exercises, leading us to expand our offerings and

provide a wider range of resources to meet their needs. Overall, user feedback served as a compass, steering us toward creating a more user-friendly, intuitive, and effective platform for promoting mental well-being.

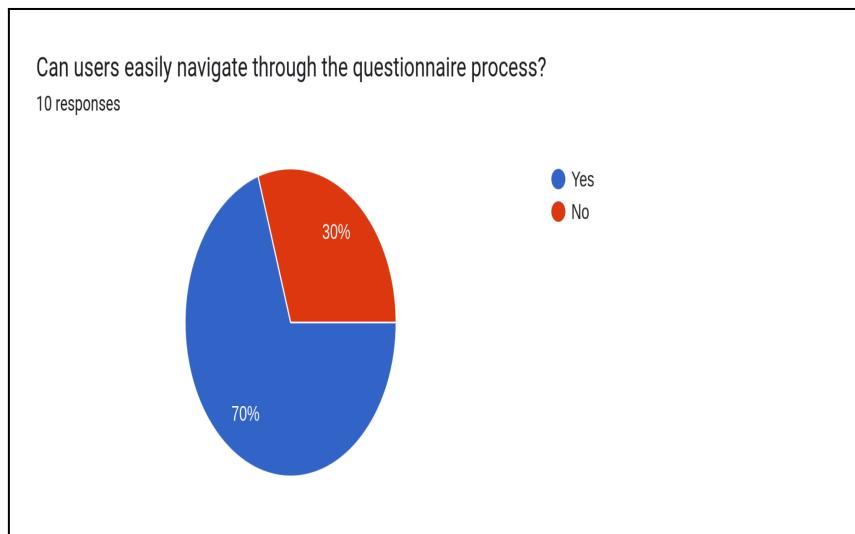
#### **Analysis of Questionnaire:-**

The Questionnaire is filled by users between 18-40 years of age.

All the users claim that they are clear with how to register on TranquilMind. Out of all the responses 20% of people find difficulty in registering on TranquilMind.



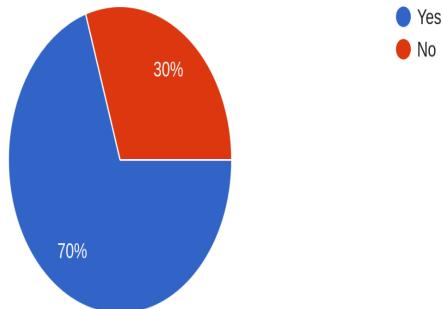
Out of all the responses 30% of people, find difficulty in navigating through the questionnaire.



Around 30% of people claim that questions in the questionnaire do not cover a comprehensive range of factors related to mental health. Whereas, 70% claim that questionnaire covers a comprehensive range of factors.

Do the questions in the questionnaire cover a comprehensive range of factors related to mental health?

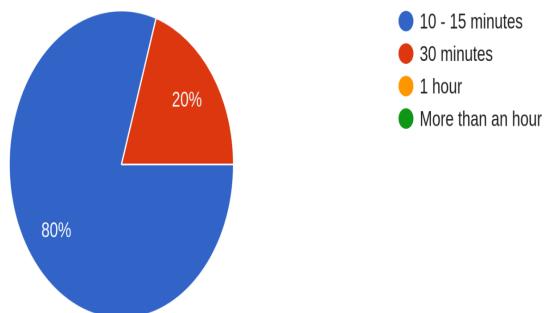
10 responses



Around 80% of people say that they spend 10-15 minutes on TranquilMind

How long do you typically spend on TranquilMind per visit?

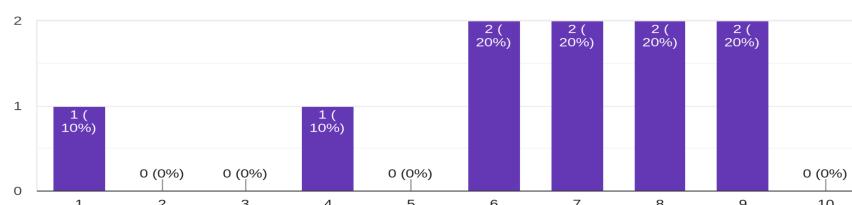
10 responses



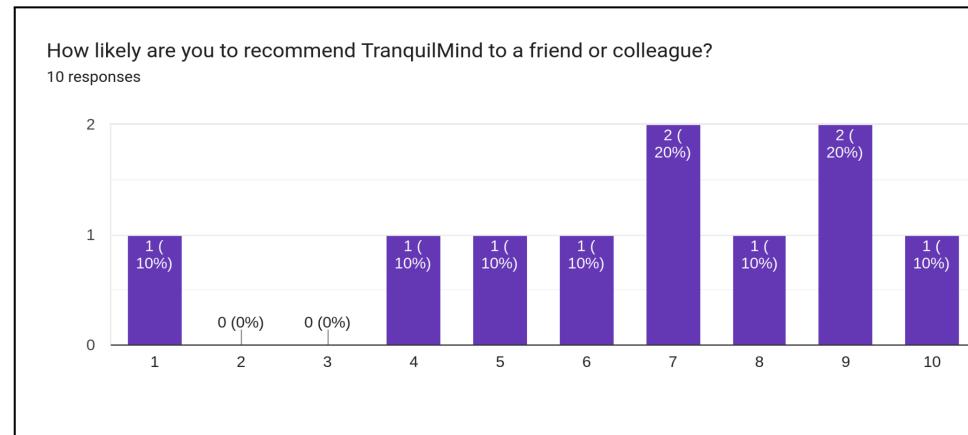
Majority of respondents are partially or completely satisfied with TranquilMind

How satisfied are you with your experience using TranquilMind?

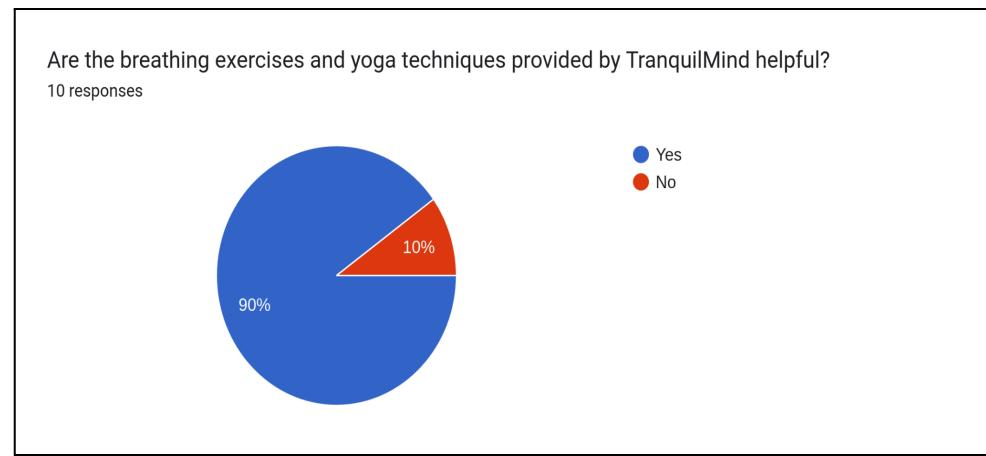
10 responses



However, recommending TranquilMind to friends or colleagues vary over a wide range as shown

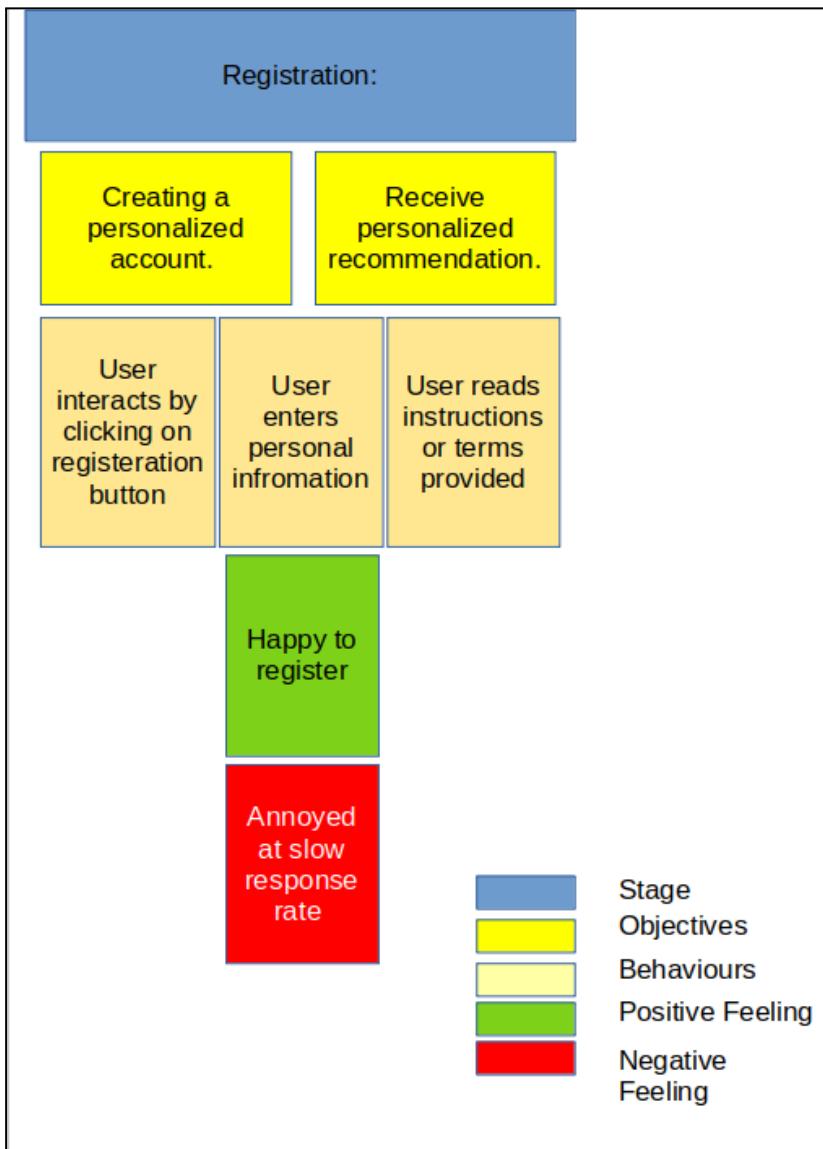


Majority of respondents find TranquilMind helpful

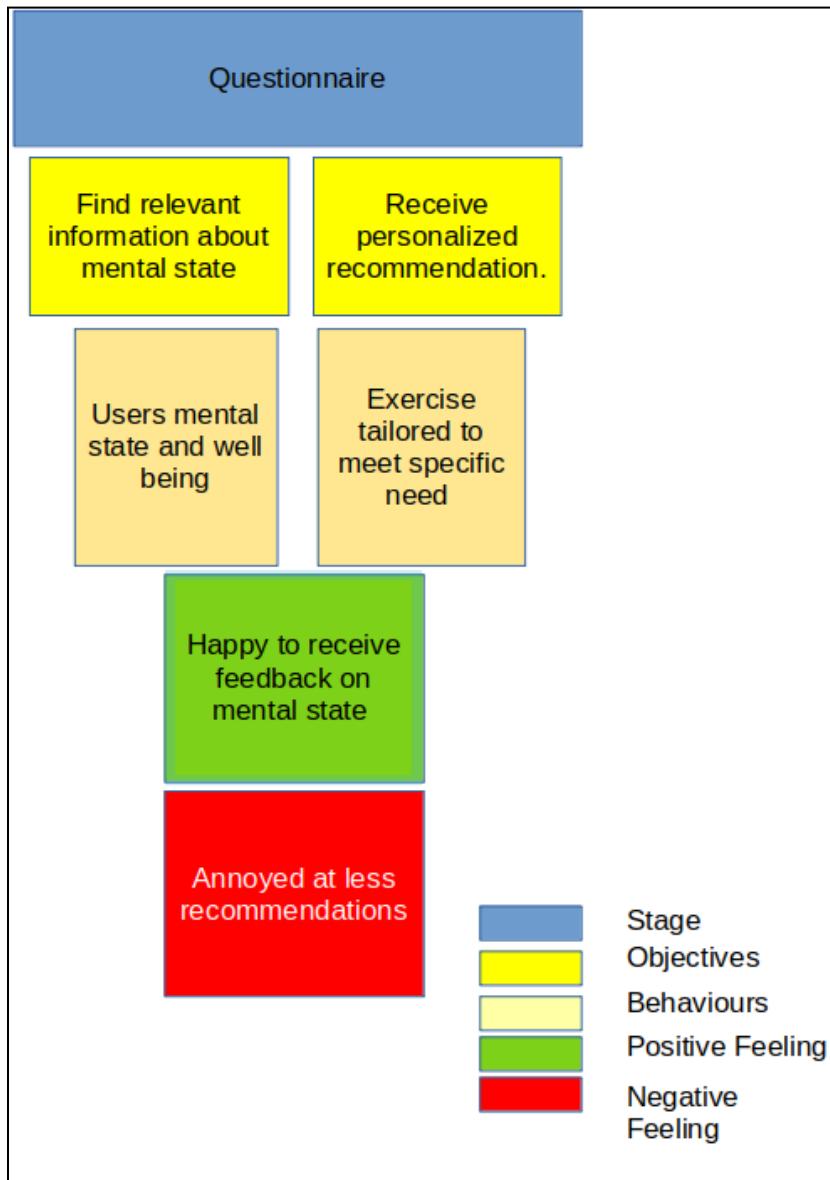


## User Experience Map:-

### 1. When the user is registering

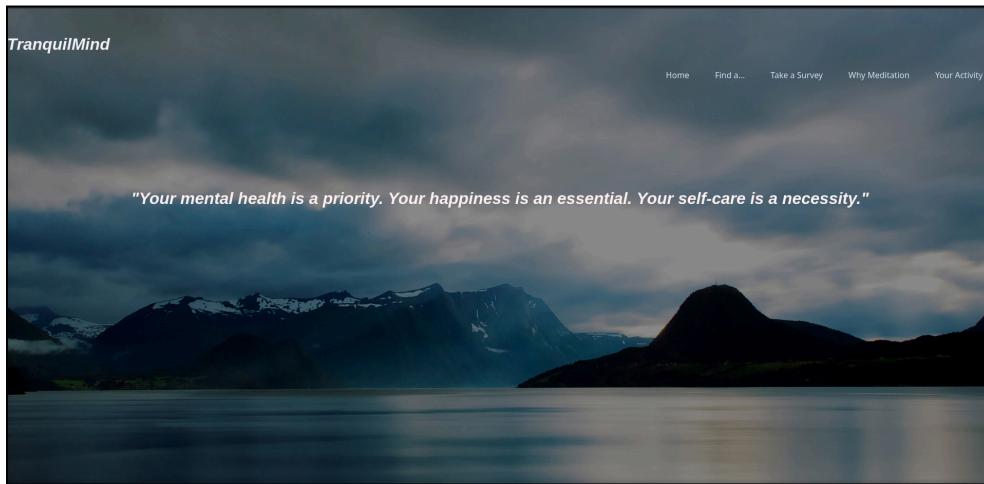


## 2. When the user is answering questionnaire



## Overview of the website:-

### 1. First Page of the website



### 2. Questionnaire

A screenshot of a survey page titled "Take a Survey". The background shows a blurred image of a lake and mountains. The survey consists of eight questions, each with a 5-point Likert scale from 1 (Strongly disagree) to 5 (Strongly agree).

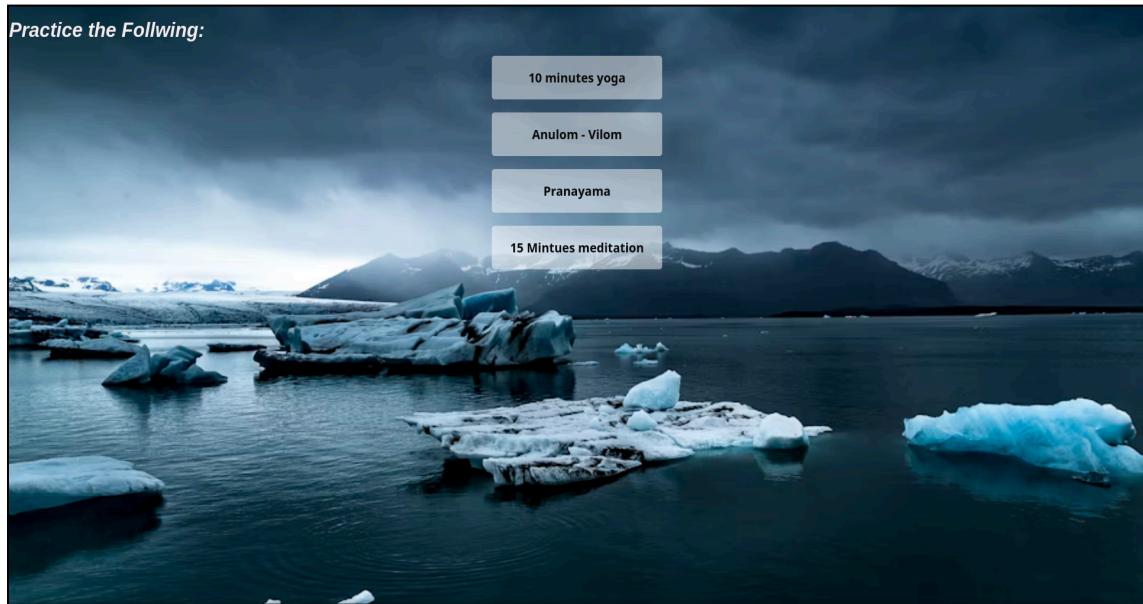
**Take a Survey**

Please fill out all the questions and select the most appropriate response:

- 1: Strongly disagree
- 2: Disagree
- 3: Neutral
- 4: Agree
- 5: Strongly agree

1. I tend to worry about things even when there is no real reason to worry.  
 1  2  3  4  5
2. I frequently experience mood swings or emotional ups and downs.  
 1  2  3  4  5
3. I often dwell on negative experiences or events.  
 1  2  3  4  5
4. I find it difficult to let go of past mistakes or failures.  
 1  2  3  4  5
5. I am easily upset or distressed by small inconveniences.  
 1  2  3  4  5
6. I frequently experience Increased heart rate and blood pressure  
 1  2  3  4  5
7. I frequently experience Muscle tension or stiffness, particularly in the neck, shoulders, and/or back.  
 1  2  3  4  5
8. I frequently experience Shallow or rapid breathing.  
 1  2  3  4  5

### 3. Recommendations based on the response



### 4. 10 minute yoga recommendation

NECK, SHOULDERS, & UPPER BACK

Yoga For Neck, Shoulders, Upper Back | 10-Minute Yoga Quickie

Yoga With Adriene

12.6M subscribers

228K views

Share

Download

Thanks

Clip

21M views 5 years ago #freeyoga #yogawithadriene #wfg

All From Yoga With Adriene Asana Related

- NECK & SHOULDER STRETCH 10:33 Stretches for Neck, Shoulder & Upper Back Pain Relief | 10 m... Madly Morrison 15M views • 3 years ago
- Healing Frequency | 1 hour handpan meditation | Malte Marten 2.1M views • 5 months ago
- Yoga For Neck and Shoulder Relief - Yoga With Adriene 15M views • 6 years ago Yoga With Adriene 17:38
- Music for when you are stressed! Sunshine 3.1M views • 2 years ago
- How I eliminated the constant stimulation in my life. (and I f... Malama Life 612K views • 2 years ago
- ANCIENT GARASWATI MANTRA FOR A SHARP MIND AND... Marakatha - Meditation Mantras 9.8M views • 2 years ago
- Yoga For Low Back and Hamstrings | 30-Minute Yoga 6M views • 4 years ago Yoga With Adriene 29:01
- Remove All Negative Energy! Tibetan Healing Sounds... Positive Energy Meditation Mus...

## 5. Breathing exercise recommendation

The image shows a YouTube video player interface. The main video frame displays a woman with long brown hair tied back in a ponytail, wearing a black t-shirt, performing a breathing exercise. She is holding her right nostril closed with her right index finger and has her left hand near her left ear. To the left of the video frame is a green vertical sidebar with white text that reads "YOGA with ❤️ ADRIENE" at the top, followed by "ALTERNATE NOSTRIL BREATHING" in large, bold letters. Below the video frame, the title "Yoga Breathing | Alternate Nostril Breathing" is visible. At the bottom of the video frame, there is a progress bar showing "0:00 / 10:57". Below the video frame, the channel information "Yoga With Adriene" with 12.6M subscribers, a "Join" button, and a "Subscribe" button is shown. To the right of the video frame, there is a row of video thumbnails for other content, including "BREATH OF FIRE", "3 EFFECTIVE Breathing Exercises", "The Freedom We Feel | 1 hour handpan Meditation", "HOW TO STUDY", "5 Ways To Improve Your Breathing", "How I rewired my brain in six weeks", and "Deep Focus Music To Improve Concentration". The overall background is dark, typical of a YouTube interface.

The image shows a YouTube video player interface. The main video frame displays a woman with dark hair tied back, wearing a light blue zip-up hoodie and pink leggings, sitting cross-legged on a pink yoga mat in a park setting. She is performing a breathing exercise with her hands near her nose. To the right of the video frame is a large green overlay text box that reads "Daily Pranayama Practice" in large, bold letters. Below the video frame, the title "15 Mins Pranayama Practice | 5 Deep Breathing Exercises you should do Daily" is visible. At the bottom of the video frame, the channel information "Bharti Yoga" with 143K subscribers, a "Subscribe" button, and a progress bar showing "0:00 / 15:02" are shown. To the right of the video frame, there is a row of video thumbnails for other content, including "10 Minute Pranayama to Increase Immunity", "Asanas and Meditation to Balance the 7 Chakras", "How Squats Heal the Body", "Do These 5 Things Before Sleeping", "10 mins Daily Guided Meditation for Positive Energy", "20 Mins Pranayama Practice", and "15 MINUTES PRANAYAMA | MORNING PURIFICATION...". The overall background is dark, typical of a YouTube interface.