

# DESIGNING A PROTOTYPE TO PROMOTE MENTAL HEALTH AWARENESS

Eamon Oldridge, Kristy Pan, Michelle Santacreu, Bryson Tang



# Mental Health

Mental health problems can affect anyone in the world, regardless of one's nationality, religion or geographic location. Opinions, thoughts, and cultural perspectives on mental health vary between countries. In China, there is a stigma surrounding mental health problems, as they follow the ideals of a collectivist culture. These issues are not openly talked about and there are limited resources available for people to find help.

## Collectivist Cultures

A collectivist culture emphasizes the needs and goals of the group over the needs and desires of each individual, and relationships play a central role in each person's identity (Cherry, 2018). People in a collectivistic culture are likely to have an interdependent view of themselves and see that they are defined in terms of relationships with others (Hopper, 2015). East Asian cultures, including China, tend to be more collectivistic and these differences can impact social norms and social anxiety (Hopper, 2015).

In a collectivist culture, the way mental health is defined and perceived is different than in an individualistic culture. In China, mental health is still a stigmatized topic, and changes have started to be implemented. In 2013, China's first law regarding mental health was implemented as a way to integrate mental health resources and education into the community (Shao, Wang, & Xie, 2014). Under this law, there is also a familial responsibility where families should foster a healthy lifestyle and become educated on mental illnesses. If they believe a family member has a mental disorder, they are to seek the proper help and care for them. This law, however, is vague in implementation details and instead focuses on outlining their goals. In addition, the classification of mental health conditions in China are based off of the system known as the Chinese Classification of Mental Disorders (CCMD-3). Although it is similar to other countries, there are variations in cultural diagnoses, such a diagnosis for qigong deviation, which is the perception of uncontrolled flow of qi in the body, something they consider as vital energy, however, is more spiritual than a mentally diagnosable condition.

## Individualist Cultures

Individualistic culture focuses on the independent view of oneself and individuals define themselves based on their personal traits (Hopper, 2015). In these cultures, relationships are often seen as voluntary and make it more likely for individuals to end relationships that are not beneficial (Hopper, 2015). People in these cultures tend to also be more altruistic, with more and more people giving to others (Marsh, 2018). This mentality is something that is not found in China, where traditional Confucian teachings emphasize the value of generosity that would benefit close family members and friends, and as a result, less value is placed on the welfare of everyone else around them (Marsh, 2018).

The United States is one country that has a individualistic culture where mental health conditions are treated differently than in a collectivist culture. In the United States, mental health is defined as the psychological well-being and satisfactory adjustment to society and the ordinary demands of life (Mental Health). The World Health Organization (WHO) report that there is no international consensus on the definitions of mental health specifications. Definitions of disorders vary between different societies, and within those societies based off social, cultural, economic, and legal setting (Freeman, Pathare, Drew, Funk, & Saraceno, 2005). The American taxonomical system, the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), is similar to the reporting by the WHO, but takes distinct Western perspectives on issues, characterized by individualism and levels of autonomy within patients (American Psychiatric Association, 2013).

# Laying the Foundation

A mental illness is a condition that negatively affects one's personal mental health. It alters the person's ability to relate to others and perform day-to-day tasks (Mental Health Conditions). It is important to understand the difference between mental health and mental illness, as the following project information will focus on mental health.

One way to empower individuals to change their mental health behaviors is by introducing them to mindfulness. Mindfulness is the practice of focusing on the present, and being aware of one's feelings, thoughts, and bodily sensations without judgement (Mindfulness Staff). Its origins are in Daoism and Buddhism, and has

become an increasingly popular therapeutic technique. Some reasons for this popularity are that it can be learned and performed without a trained facilitator and at no cost to the individual (Positive Thinking Mind). Additionally, mindfulness has been shown to decrease anxiety, increase stress-resilience, and improve cognitive function, even compared to more traditional alternatives (Ostafin & Kassman, 2012; Troy, Wilhelm, Shallcross, & Mauss, 2012; Georgetown University Medical Center, 2017).

To better understand the perceptions of mindfulness in China we distributed a survey to college students. Out of 456 responses, we found that 27% of the college students do not currently practice mindfulness, however 94% are interested in learning more about it.

## Potential for Change



I practice mindfulness techniques to enhance my sense of mental health.



I want to learn more mindfulness techniques relative to mental health.

# Taking the Steps to Change

In order to understand and facilitate change in the behavior and perceptions of mental health in China, the Transtheoretical Model of Behavior can be applied. The Transtheoretical Model was developed to describe the process of behavioral change in individuals, viewing it as a process rather than a single event, and identifies five main stages an individual progresses through as their behavior changes (Adams & White, 2004).



## **Pre-Contemplation**

Individuals are unmotivated to change and not ready to accept help.

## **Contemplation**

People begin to think about changing and are more aware of the consequences of change but are not ready to take action.

## **Preparation**

People intend to start changing in the immediate future and have a plan of action.

## **Action**

People are making specific changes in their lifestyles, but not all changes in behavior can be classified under action.

## **Maintenance**

People have made changes in their lifestyles and are working to prevent relapse and continue to try to maintain those changes made (The Transtheoretical Model).

An individual going through the stages of change can **relapse** at any point and go back to a different stage, once again starting the cycle (Prochaska & Velicer, 1997).

# Our Sponsor: Xin Foundation

Our sponsor for this project was the Xin Foundation. Established in 2017, the Xin Foundation is a non-governmental charitable foundation and their mission is to “make more people happy” (Xin Foundation). They achieve this by working to increase community awareness in the areas of mental health, spiritual growth, and public welfare support through different plans. As a result of their mission and their efforts in the community, our project was developed.

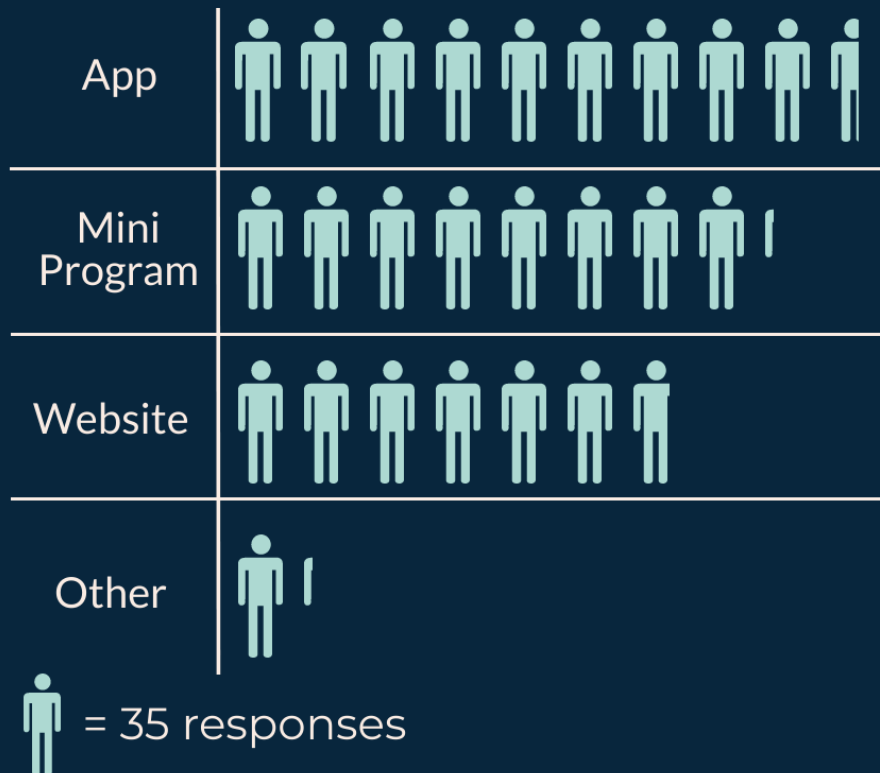


# First Steps

The purpose of our project was to design an interactive platform to promote mental health and mindfulness for college students in China. College students were decided as the target audience as we had an easier opportunity to interact with them and better understand what they wanted as a resource. With the help of our sponsor's feedback and from our survey responses about the best platform to use, we decided to design a prototype for a WeChat Mini Program as a resource for students to learn more about mental health and mindfulness.

WeChat is a social and messaging app, with different sub-applications built into the program. A WeChat Mini Program is a sub-application of WeChat, where it functions as an app within WeChat.

## How I would find mental health and mindfulness resources



\*Participants chose all that applied

The results from the survey showed that 63% of the college students would choose to use a mini program when looking for information about mental health. This helped us with the decision of choosing a mini program as the platform. An application, the second main option we considered, is more powerful feature-wise than a WeChat Mini Program, but takes up more memory space on a phone. WeChat Mini Programs are incorporated into an app users already have and require no additional download in order to use, thus making it more convenient. Additionally, WeChat Mini Program use has been on a steady rise (Graziani, 2018).

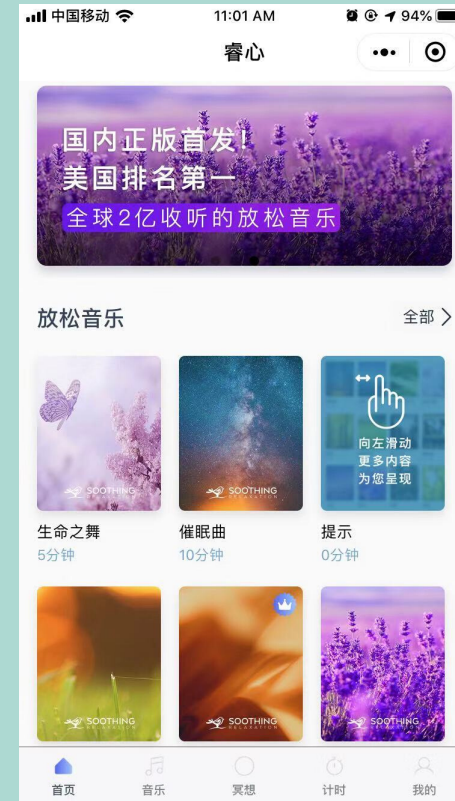
# What Already Exists?

Before we began prototyping our mini program, we needed to get a better understanding of mindfulness resources already available. To do so, we looked at two mini programs and two apps.

## WeChat Mini Programs

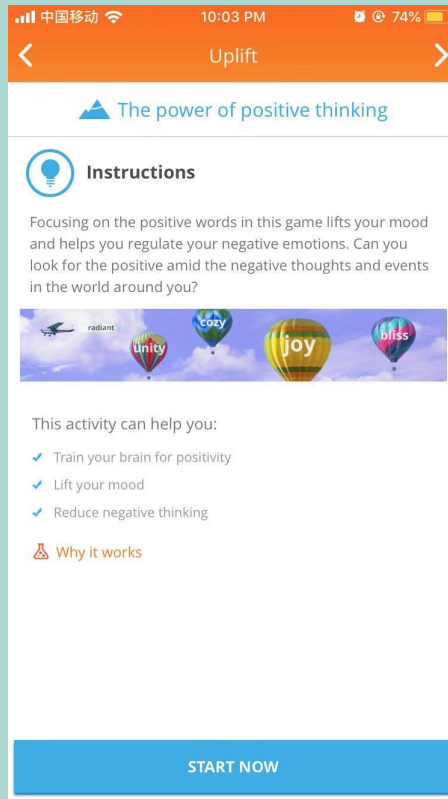


Breathing Meditation is a mini program focused on applying mindfulness techniques to daily life by having body scan meditation, white noise recordings, and audio regarding kindness and compassion.

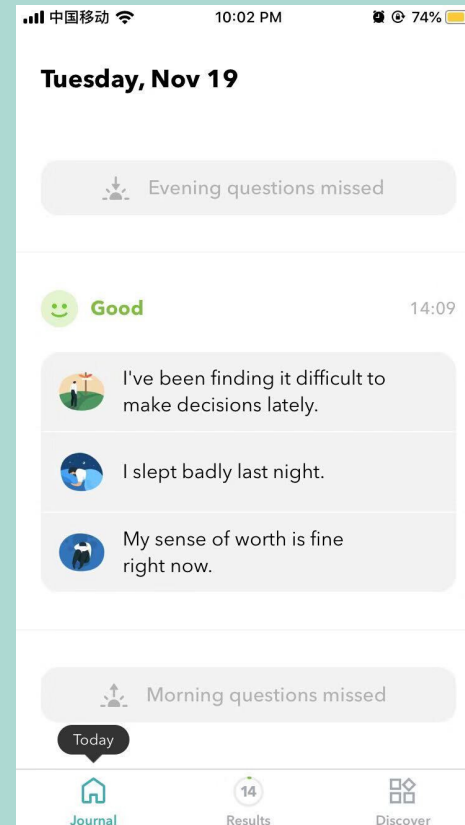


Wiseheart has different categories of activities, such as mindfulness courses, mindfulness exercises, soothing music, and the ability to join groups for meditations.

# Apps



Happify seeks to make individuals happier. Instead of only being informative, the platform integrates games to engage users and make their experiences enjoyable.



Moodpath is an online journaling system that tracks mood. It synthesizes the journal information to create summaries a user can show to an outside therapist. There are also courses on mindfulness and listening exercises that help users in various aspects of their day-to-day life.



# What this Means

These mini programs and apps helped us decide how we wanted to design our prototype of balancing informative resources while making it an engaging platform.

In addition to looking at other mini programs and apps, we also conducted surveys and focus groups that helped us determine what to include in our prototype. The feedback we received was focused on trying to provide individuals with professional resources while making it engaging at the same time.

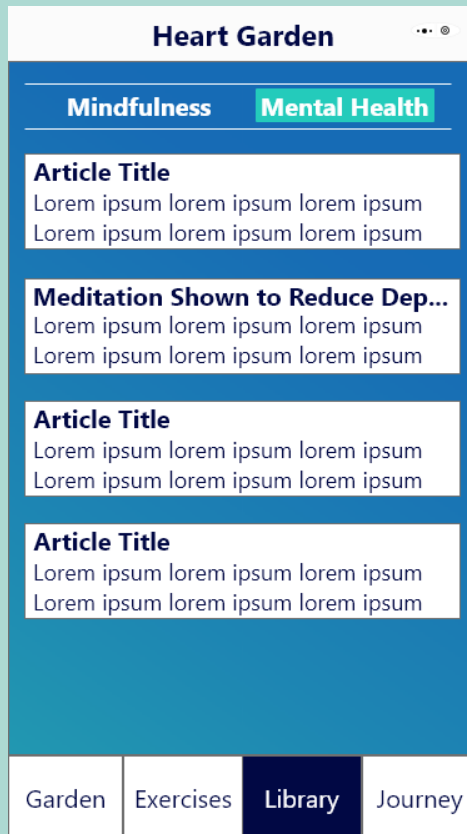
By combining the ideas of providing information and providing incentives to keep using the app, we designed our prototype. The prototype we designed contains four main categories: library, exercises, journey, and garden.

From this point forward, the word prototype will be used to describe our deliverable. The prototype is a collection of semi-interactive storyboards that imitate the functionality of a mini program. However, the prototype itself does not have the full capabilities that the mini program will have once developed.

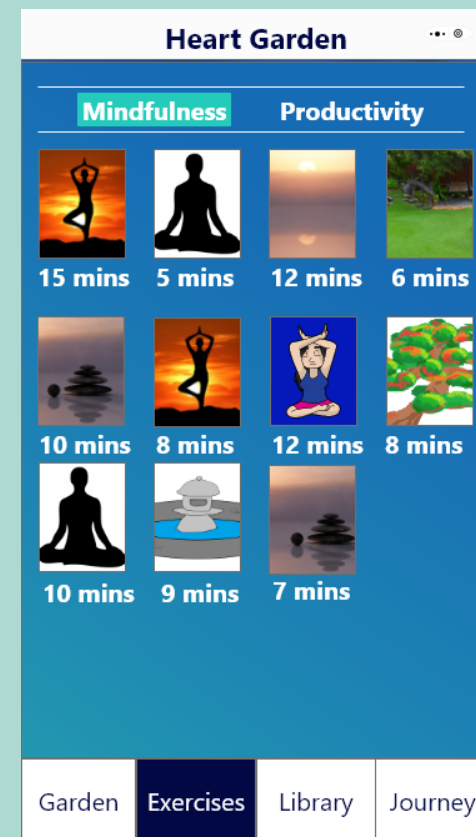
# Next Step... Prototype



# library



The library section of our prototype aims to educate users about mental health and mindfulness. In our first round of focus groups, students expressed that they had a difficult time finding reliable online resources and for this reason typically turned to reading books instead. We wanted to provide students with professional and credible resources to show them that these types of resources do exist. We chose to design this section of our prototype similar to a library as it is something the students are already familiar with and trust. This section contains articles in different categories so users can learn more about mental health and mindfulness. The user is able to navigate to the different sections using the top navigation bar and from there are able to see all the articles in that category. They can then choose to read that article and have the ability to take notes or highlight within the article as well.



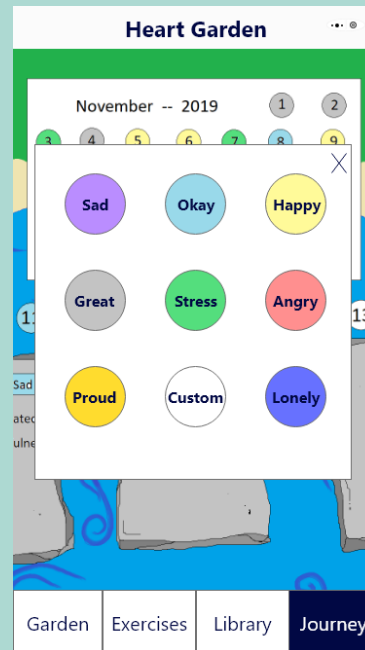
The exercises section aims to encourage users to practice mindfulness exercises. This section follows a similar design format to the library section. There are different categories of exercises that users can do depending on what they are interested in. Exercises will consist of audio recordings that walk the user through various mindfulness exercises. Each exercise has a time estimate so users know how much time they need to dedicate to it. This section allows students to practice mindfulness activities that reflect what they have read in the library section.

# exercises

# journey



**Each stepping stone has an option to input your mood, indicated by the peach oval.**



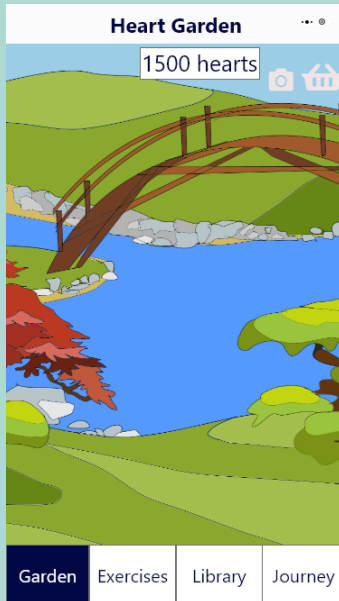
**Click on the peach oval to record your mood for the day.**



**The oval is now yellow to represent the user felt happy that day.**

The journey section is a way for users to keep track of articles read and exercises completed, which will be shown in the weekly view. Users can also write notes to themselves on how they felt that day and record their moods in this section. The weekly view is portrayed as stepping stones because it represents the steps users are taking in order to increase their awareness of mental health and mindfulness. There is also a color-coded monthly calendar that displays the user's mood history.

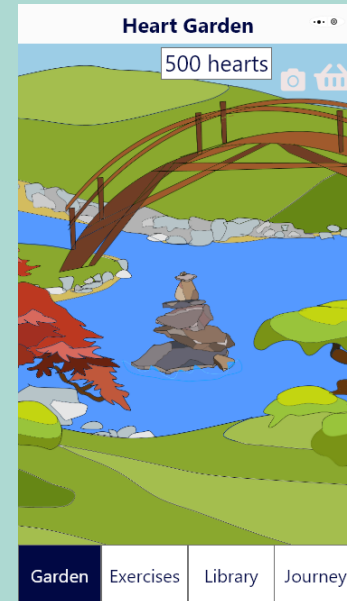
# garden



**The number in the top center indicates the number of hearts a user has to spend on objects for their garden.**



**The shopping basket icon opens the garden shop. Each object is worth a certain number of hearts.**



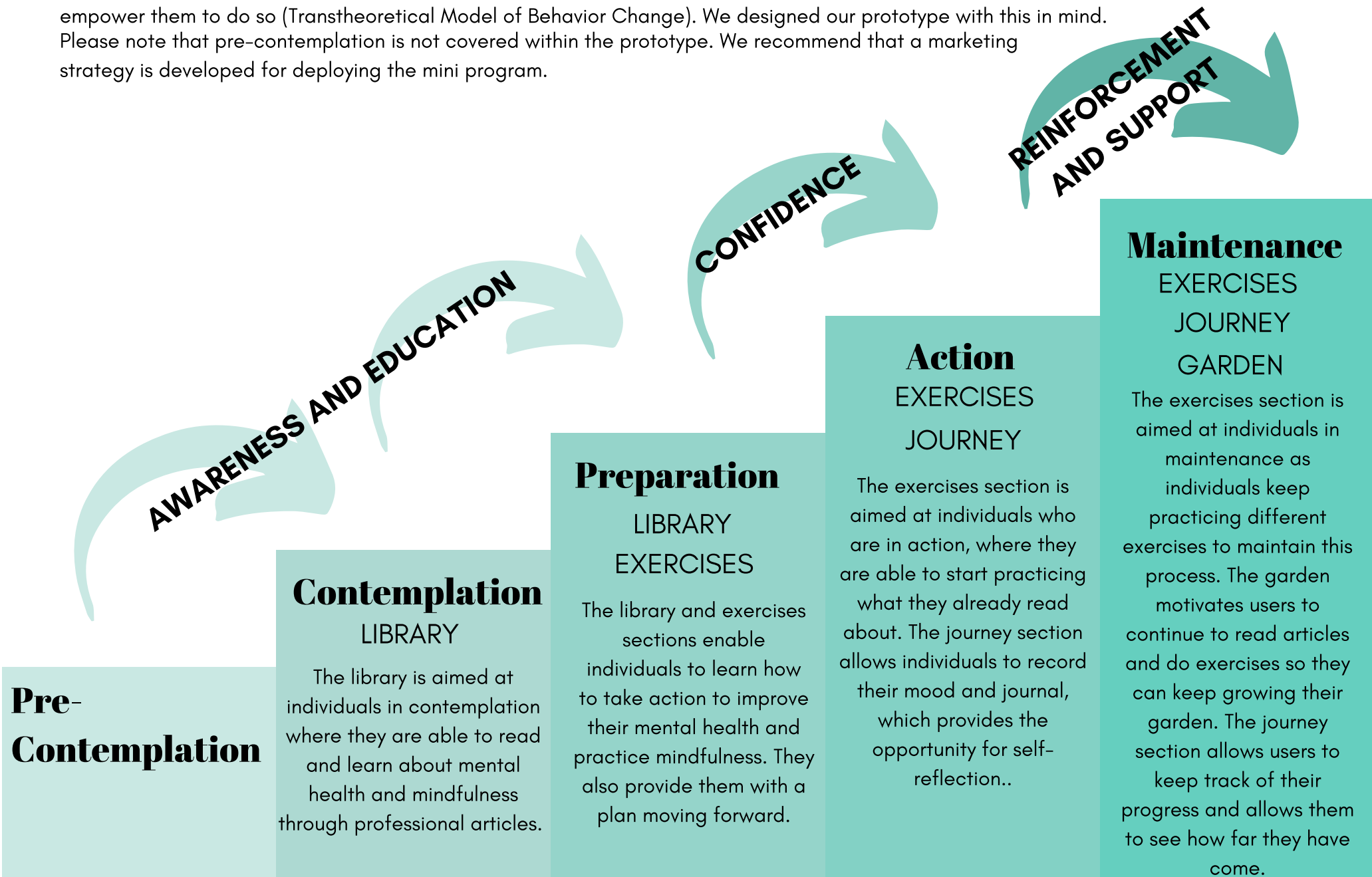
**The user chose to buy the rocks for 1000 hearts and they are now placed in the pond.**

The garden section provides users with an interactive garden that they can design themselves. Users can earn new objects to decorate their garden by reading articles, completing exercises, and consistently using the features. For each of these achievements, the user earns 'hearts' they can spend in the garden store.

Users are also able to share an image of their garden to their Moments in WeChat. This enables users to show their gardens to their friends while also serving as a marketing tool.

# Going through the Steps

In order for individuals to move through the stages of the Transtheoretical Model, there are certain processes that must take place. Some of these processes consist of education and understanding of the subject, confidence they can make and maintain changes, and strategies that empower them to do so (Transtheoretical Model of Behavior Change). We designed our prototype with this in mind. Please note that pre-contemplation is not covered within the prototype. We recommend that a marketing strategy is developed for deploying the mini program.



# Recommendations

The prototype we designed will be brought to a mini program development company. They will use our prototype and descriptions to develop a fully functional mini program. We would like to offer the following recommendations to further improve the prototype and opportunities for future IQP projects.

1

**Add more categories to the library and exercises sections of the mini program.** This addition of more categories would be valuable, as more individuals would have the opportunity to find activities and articles that would suit what they are looking for.

**Develop a marketing strategy for deploying the completed mini program.** This strategy would be valuable by informing college students about the mini program and get more individuals interested in learning about it.

4

2

**Continue to add resources to the library section and new exercises to the mini program.** This continual addition of literary resources would be valuable as users would have the most up to date information to learn from and more resources to choose from.

**Analyze usage statistics and perform more focus groups to get user feedback once the mini program is deployed.** This analysis would be beneficial so that the users find things that are interesting to them. This also provides the opportunity to include new ideas users want.

5

3

**Expand the functionality of the garden.** This would be beneficial as it would keep users more engaged through the addition of new features and interactions, such as enabling users to interact with each other.

**Take the prototype designed for college students and apply it to another demographic.** This could be a future IQP project that would take this design process and make the changes necessary to fit another target audience.

6

# Our Personal Experiences

During our time at the Xin Foundation, we got to experience the wide breadth of resources they have access to. We got to work side by side with a professor of psychology, graduate students of psychology, a Mini Program development team, and the friendly staff of the Xin Foundation. Everyone associated with the foundation believed in the mission and that could be seen through their friendliness and willingness to help. When working on the project we tried to embody this energy and express it into the final product and paper. I sincerely hope to take a piece of that energy back home with me and apply it to everything I do moving forward. - Bryson Tang



**Bryson Tang**



**Kristy Pan**

Through working with the Xin Foundation, I feel like I have learned so much from them. The individuals who work at Xin Foundation have been so kind and willing to help us during our project process. They also make me want to try to live in the moment more. As a foundation, they want to make more people happy, and that has inspired me to try to make more individuals happier in small ways. Working with them in China has really opened my eyes to a different culture and I couldn't be more grateful for this experience. - Kristy Pan

## Michelle Santacreu



Working with the Xin Foundation has been a great experience. Everyone at the foundation is so kind and helpful. They taught me a lot about appreciating all aspects of life and remembering to take time to focus on yourself and your own well-being; it is only then that we are able to better help others. I learned to appreciate the small things in life and to focus on the present. I was also able to learn a lot about Chinese culture and had the opportunity to work with many different people from different backgrounds. I love the mission the Xin Foundation has of always striving to make people happier, as this is something I try to do in my life as well. - Michelle Santacreu

Though I thought I knew abstractly what I expected to learn on this trip, and guessed at the methods through which I would, I have been nothing but surprised. Academically, experience on projects of this scope is rare and valuable. I feel like I was pushing the frontier of my group experience and utilizing my strengths in creative ways. I am exceedingly proud of the work we've done. Personally, I have been exposed to people with passion, commitment, and generosity of such intensity and in such concentration as I haven't seen before. This project had a ton of confusion and adversity, too. I wouldn't describe it as "I rose to the challenge." It felt more like I was always up to it; the barrier instead was the confidence and vulnerability to take on the responsibility. - Eamon Oldridge

## Eamon Oldridge





# Acknowledgements

**We would like to acknowledge the following individuals and organizations for their help in the success of this project.**

Our advisors, Adrienne Hall-Phillips and Thomas Balistreri, for their continued support throughout our project.

Our sponsor, the Xin Foundation, for providing us with valuable resources throughout our project.

Hangzhou Dianzi University (HDU) students Zhi Dong Wang and Wen Ting Yu for their help in facilitating our focus groups.

Our HDU buddies for their hospitality and guidance during the time we were in China.

HDU for the support of all six IQP teams.

# References

- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Washington, DC: Author.
- Aurora Health GmbH. Moodpath [computer software]
- Breathing Meditation. Breathing meditation [computer software]
- Cherry, K. (2018). Understanding collectivist cultures. Retrieved from <https://www.verywellmind.com/what-are-collectivistic-cultures-2794962>
- Cognitive Leap. Wiseheart [computer software]
- Dictionary.com. Mental health. Retrieved from <https://www.dictionary.com/browse/mental-health?s=t>
- Freeman, M., Pathare, S., Drew, N., Funk, M., & Saraceno, B. (2005). *WHO resource book on mental health, human rights and legislation* World Health Organization. Retrieved from [https://ec.europa.eu/health/sites/health/files/mental\\_health/docs/who\\_resource\\_book\\_en.pdf](https://ec.europa.eu/health/sites/health/files/mental_health/docs/who_resource_book_en.pdf)
- Georgetown University Medical Center. (2017). *Mindfulness meditation training lowers biomarkers of stress response in anxiety disorder: Hormonal, inflammatory reactions to stress were reduced after meditation training, in rigorous NIH-sponsored trial*
- Graziani, T. (2018). What are WeChat mini-programs? A simple introduction. Retrieved from <https://walkthechat.com/wechat-mini-programs-simple-introduction/>
- Happify, I. Happify [computer software]
- Hopper, E. (2015). Individualist or collectivist? How culture influences behavior. Retrieved from <https://healthpsych.com/individualist-or-collectivist-how-culture-influences-behavior/>
- J, A., & M, W. (2005). Why don't stage-based activity promotion interventions work? *Health Education Research*, 20(2) Retrieved from <https://doi.org/10.1093/her/cyg105>
- Marsh, A. (2018). Could a more individualistic world also be a more altruistic one? Retrieved from <https://www.npr.org/sections/13.7/2018/02/05/581873428/could-a-more-individualistic-world-also-be-a-more-altruistic-one>
- Mental health conditions. Retrieved from <https://www.nami.org/learn-more/mental-health-conditions>
- Mindfulness Staff. (2014). What is mindfulness? Retrieved from <https://www.mindful.org/what-is-mindfulness/>
- Ostafin, B., & Kassman, K. (2012). Stepping out of history: mindfulness improves insight problem solving. *Consciousness and Cognition*, 21(2), 1031-1036. Retrieved from <https://www.sciencedirect.com/science/article/abs/pii/S1053810012000578?via%3Dihub>
- Positive Thinking Mind. Mindfulness exercises for anxiety. Retrieved from <https://positivethinkingmind.com/anxiety/mindfulness-exercises-for-anxiety/>
- Prochaska, J., & Velicer, W. (1997). The transtheoretical model of health behavior change. *The Science of Health Promotion*,

Shao, Y., Wang, J., & Xie, B. (2014). The first mental health law of China. *Asian Journal of Psychiatry*, , 13, 72-74. Retrieved from doi:10.1016/j.ajp.2014.11.002

The transtheoretical model. Retrieved from <https://www.prochange.com/transtheoretical-model-of-behavior-change>

Transtheoretical model of behavior change. (2008). Retrieved from <https://www.prochange.com/transtheoretical-model-of-behavior-change>

Xin foundation. Retrieved from <http://xinfoundation.com.cn/>