Peer Testing 2 – Dawson Psychological Services A

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COSC 499

3 March 2021

Description of System

The Health Circles mobile app encourages users to have a holistic view of their own mental health. Users answer questions to quantifiably describe their well-being in several different domains (physical, mental, emotional, social, spiritual) which are represented visually as circles of varying sizes. Users can add activities to their calendar to improve their well-being in each domain.

Current Features

- Users can register for an account with email and password, login, and logout
- Users answer a health questionnaire with questions from any of 5 domains (social, emotional, mental, physical, and spiritual).
- Users can choose which domains to do the questionnaire for
- Users answer questions to rank aspects of each domain (eg sleep for the physical domain) on a scale of 1-7
- Questions are stored on a server
- Users can view circle visualizations of questionnaire results
- The visualization consists of circles representing each health domain
- The size of each circle correlates with their wellbeing in each domain
- The visualizations are generated from random scores at this point, not generated from user data
- Users can view strategies and suggested activities to improve each domain of health
- Users can schedule activities using the in-app calendar
- The calendar is populated with test activity data, and users can edit existing activities or add new ones
- Scheduled activities can be viewed on a calendar or as a list
- Users navigate the app with a bottom navigation menu, and can jump directly to the calendar, questionnaires, stats/visualizations, and account/settings
- A server handles user registration and login, and stores their questionnaire answers
- Users can remove their data from server

Participants

Name	Status	Type	Video	Session Ran By
Andrew Johnson	Completed	remote	link	Meredith
Quinn Wright	Completed	thinkaloud	link	Meredith
Kathryn Lecha	Completed	remote	link	Michael
Jennifer Mclean	Completed	thinkaloud	link	Michael
Jinyang Yao	Completed	remote	link	Lucas
Nathan Wickenheiser	Completed	thinkaloud	link	Lucas

User Group

People who do not work with our client, Dr Dawson, but are interested in improving their mental health.

List of Tasks

1. Register for an account and login.
2. Schedule a daily reminder to check the app (for testing purposes, pick a time in the next few minutes).
3. Fill out a questionnaire.
4. Edit your completed questionnaire.
5. View the Circles page. These are a representation of your score for each domain.
6. View the suggested activities, and add one to your calendar.
7. Edit an activity in the calendar.
8. Log out of the app.

Issues Discovered

High Priority

- Survey scores on circle visualization page should be an average of recent user results and have clearer context (such as what each score is out of).
- The login page shows an irrelevant error message when the user tries to enter a password that is too short.

- Editing activities does not work on Android, likely because of issues with the datetime format.
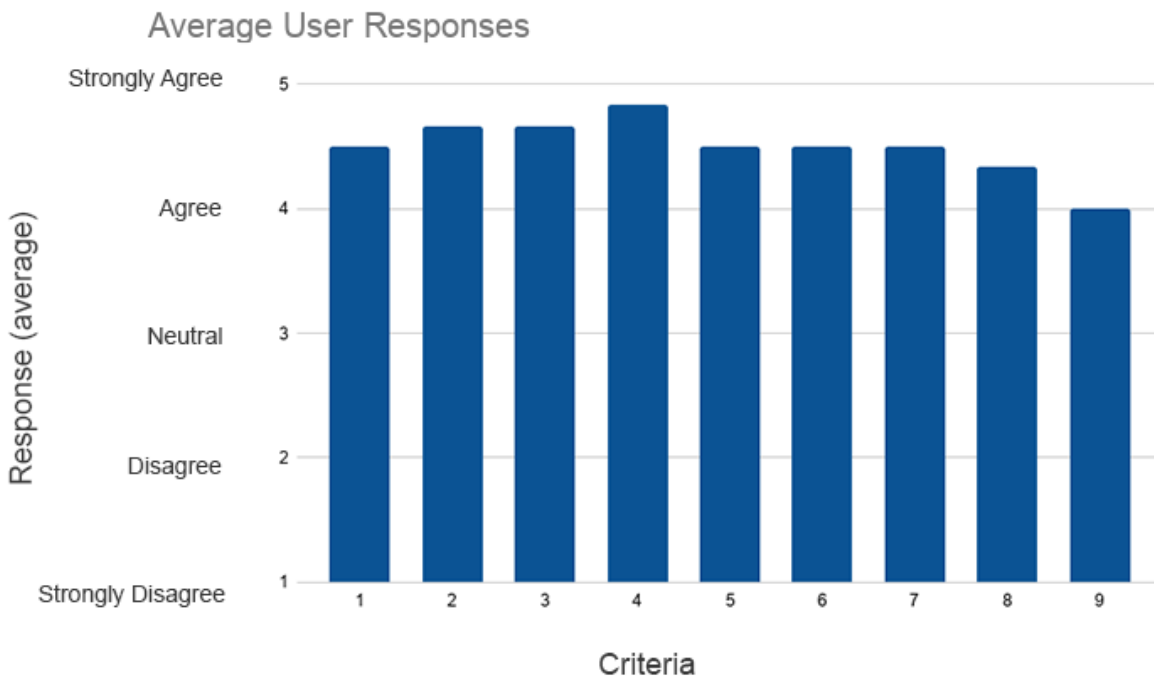
Medium Priority

- Calendar page formatting issues:
    - Cannot switch from calendar view back to list view.
    - Spacing for days of week is too tight to see them.
- Survey questions and how to answer them with the slider is not always clear.
- No error message or help if zero domains are selected for a questionnaire.
- Can only add one activity to each day.

Low Priority

- When editing an activity, the title and description text are white. This was interpreted as a field that must be retyped.
- When adding or editing an activity, the user cannot scroll to close the keyboard.
- Users had difficulty identifying the questionnaire tab on the navigation bar, but were able to find it through trial and error.
- When editing an activity, the user must tap the date and time fields to see their current values.
- The app crashed after starting a questionnaire for spiritual and physical domains. We were unable to reproduce the error.
- Contrast ratio of colours needs adjustment.
- No confirmation/notice when you have completed or edited a questionnaire.
- No confirmation/notice for setting the daily notification.
- On iOS, the user must tap twice on a date or time picker to edit it, then tap outside the picker to save the value. This was confusing for some users.

Quantitative Scores

Average User Responses

	Response (average)

Strongly Agree — 5

Agree — 4

Neutral — 3

Disagree — 2

Strongly Disagree — 1

Criteria: 1, 2, 3, 4, 5, 6, 7, 8, 9

Criteria	Description	Average Response
1	The system design affords good visibility of system functionality.	4.5
2	The presentation of information and objects in the system resemble things are in the real world.	4.67
3	The system allows the user to maintain control and provides the user with freedom to do what is needed.	4.67
4	The system's design is consistent with how other software is designed.	4.83
5	The system has mechanisms in place to helps me not make mistakes when using it.	4.5
6	I can figure out what needs to be done in the system even if I can't remember exactly what the commands are.	4.5
7	To complete a task in the system, I have a choice in the commands I use.	4.5
8	The design of the system is simple, clear, and aesthetically pleasing.	4.33
9	When I get stuck, the system has help and documentation to help me figure out what I need to do.	4

Analysis of Results

There are 54 data points used in the graph, with 9 data points from each of the 6 user testing sessions. All criteria received a higher average score compared to the quantitative scores from Peer Testing 1. The lowest score of 4 was regarding "when users get stuck, the system has help and documentation." We anticipate that this issue will be solved after we have added a tutorial to the app.

The quantitative scores do not reflect several issues that impact core app functionality. For example, it is a high priority for the circle visualizations to reflect actual user scores rather than randomly generated scores. Features such as editing activities on the calendar must be functional on both iOS and Android. Although these issues did not significantly lower our quantitative scores, it is critical that we resolve them to meet our client's requirements.

Our medium priority issues primarily address the criteria that "the system has mechanisms in place to help users not make mistakes" and that "the user can figure out what needs to be done even if they can't remember the exact commands." One of these issues is improving the calendar page layout so users can more clearly see how to interact with it. Adding error messages or tooltips will help users know to select domains before pressing the "begin" button for questionnaires. Rewriting some of the questions will make it clearer how users should answer them.

Our low priority issues consist of minor issues that do not significantly impact the user experience and quantitative scores, or issues that we have spent considerable time exploring without finding a solution. In the former category, the score for "The design of the system is simple, clear, and aesthetically pleasing" could be improved by adjusting font and background colours. The score for "the system design affords good visibility of system functionality" could be improved by showing the user confirmation of successful actions, such as scheduling notifications or submitting a questionnaire. In the latter category, issues like the user needing to scroll to close the on-screen keyboard or multiple taps needed to edit a datetime value are unlikely to be resolved with the scope of this project. Although slightly inconvenient, these issues do not impair app functionality, and require significant work to resolve due to the challenges of developing simultaneously for iOS and Android.