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# Improving Cornell University Community Connection: A Method to Ameliorate Student Mental Wellness

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## Abstract

Stress management is a crucial component in an individual's mental wellbeing. While there are different technologies that aim to address symptoms of stress, few focus on leveraging the positive effects of community connection in tackling the root cause of an individual's stress, and ultimately mental wellness. In this paper, we iterated on design solutions ranging from an events app to a Denice Cassaro events app and, finally, to a Cornell University course that bridges the gap between stress management and community connection. Cornell Community Connection is a course design that goes beyond alleviating the symptoms of stress. It promotes mental wellness awareness among students through exposing them to local resources and engaging them in the community. We used an HCI design process that relies on contextual interviews, user testing, and HCI research techniques and philosophies, including co-design, feminist HCI, and non-design.

## Author Keywords

Stress management; community connection; user experience; usability; HCI

## ACM Classification Keywords

Human-centered computing; HCI; Interaction design; interaction design process and methods; user interface design.

## Introduction

Given the fast pace of modern society, many individuals suffer from the stress of their academics, work, relationships and daily life. Such phenomenon is especially prevalent among college students. A survey carried out as a joint effort between the Yale Center for Emotional Intelligence and the Born This Way Foundation shows that over 75% of the 22,000 students sampled responded with negative emotions when asked how they are feeling<sup>[1]</sup>. Cornell Health Counseling and Psychological Services (CAPS) reports that they provided care to 21 percent of Cornell students in 2016–17, up from 13 percent in 2005–06<sup>[2]</sup>. Long-term negative emotions can undermine students' mental conditions and consequently impact their academics.

Our final design tackles stress management at the core of the problem. Rather than solving for repercussions of a broken system, we aim to transform the values of the system itself. *Cornell Community University Connection* is a 1 credit class that is easily accessible by students and fulfills academic requirement. The name "Community Connection" is inspired by the emails sent out by Denice Cassaro, the Program Coordinator in Campus Activities. Her emails contain lists of events that emphasize mental, physical, and social wellness and are hosted by organizations across the campus. While Denice's emails aim to better connect students with local events around them, the problem is that users don't read them. From one side, the *Cornell University Community Connection* course will have an attendance and writing component that encourages students to reflect on the importance of stress management and overall mental wellness. From the other side, the course will be a step in a new direction for the university. If Cornell were to implement such a course, this would recognize the

importance of stress management on equal footing with academic rigor.

In this paper, we discuss the process and research behind *Cornell University Community Connection*, analyze its implications, and discuss further applications beyond just stress management.

## Related Work

Current technologies in the market that address stress management and mental wellness focus on the aftermath of the problem rather than the root. For example, Headspace is an app that helps users cope with stress through the practice of meditation. However, it doesn't undercut the sources of stress or promote a change in the underlying system. Other wellness technologies including Lifesum, Sleep Cycles, and the Fitbit focus on different subsets of the mental wellness umbrella.

Overall, existing technologies fall short in transforming the value of managing stress or providing incentives to encourage users incorporate to mental awareness in their everyday lives. Interviews showed that college students with poor mental wellness tend to focus on the negatives and refrain from seeking help at the time. There is an existing notion that mental wellness is very much an individual activity that cannot involve others. Thus, we believe there is still a lot of opportunities in this problem space.

In *Exploring the Stress and Self-Interventions for Mental Wellness*<sup>[3]</sup>, Lee and Hong developed *MindNavigator*, a workshop in which groups of college students were invited to generate behavioral change goals to manage daily life stress and practice personalized intervention. The study showed that the social nature of the workshop helped participants better understand themselves. We build on prior studies to propose an analytical framework of personal informatics for mental wellness.

## Design Objectives

### *Topic Scope*

Initially, our group set out to design for the community of individuals living with mental illness. The topic of mental illness is an underrated and under-discussed one, as there is a strong stigma surrounding the topic. However, due to the sensitive nature of this user group, we shifted our focus to mental wellness and eventually a subsection of mental wellness, stress management.

We were able to narrow the scope of our project with an initial round of user interviews. The goal was to understand user behaviors and habits that affected mental wellness (both positively and negatively). The results of our interviews showed that stress was the number one contributor to mental wellness on campus. And thus, our topic was born.

### *Research Rationale*

We approached the topic through the lens of two research methodologies, co-design and feminist HCI. We wanted to embody the Northern European design approach of "user as partner."<sup>[3]</sup> We chose to utilize co-design in capturing the Northern European approach of "user as partner" (Sanders & Stappers, 2008). We used a two-dimensional co-design approach by bringing in users with two opposing perspectives on the issue, students and administration.

Feminist HCI served as a design philosophy throughout our research. From our initial round of interviews and secondary round of co-design, we noticed a disparity in the way males and females deal with stress. In order to overcome gender biases in stress management, we made specific design decisions to address the issues in all iterations up to the final design solution. Furthermore, we were inspired by the third-wave feminism approach (discussed in class) of inclusivity across socio-economic status and diversity.



Figure. Ideating on the problem space

## Iteration I: Moody Events

### *Brainstorming Solutions to Manage Stress*

Based on the feedback from user interviews, we conducted a brainstorming session to populate the solution space. We combined and narrowed our results to three of the best ideas:

1. Image Reflection: An art gallery installation that displays photographs and imagery from happier times in students' lives (e.g. vacations, visiting family, etc.)
2. Seeking Space: A public room on campus designated as a space for students to destress and hosts community events for student wellness
3. Moody Events: An events app paired with a calendar notification that sets one day of the week for the user to go to an event and destress

We began with "Moody Events" as our design solution concept, as it seemed the most plausible and the most effective. The other two ideas were either already available in some form on campus or difficult to access for most students. For example, Cornell Minds Matter hosts events throughout the semester that target stress management. On the other hand, an art installation would mean that students have to go out of their way to view or access it.

## Iteration II: Cassaro Connection

### *Feminist HCI: A Design Philosophy*

In developing a solution to help reduce mental stress on campus, we sought to uphold and feminist HCI ideals using both critical and generative design techniques. We applied this design philosophy by implementing a survey targeting all genders. The goal was to better understand the diverse perspectives, values, practices, and cognitive processes across the gender spectrum. Initially, we chose to send this survey out to ~25 undergraduate women, hoping to emphasize the needs of women. We found that

women highly value companionship in attending events. Our research questions sought to uncover the institutional systems set in place that bias a certain gender over another. After receiving responses from female students, we promptly sent the interview to ~25 undergraduate men to complete the analysis. This information would be useful in informing design decisions throughout later iterations.

#### *Co-Design: Two-Sided Experts*

Noting our intentions to develop a solution that helps students reduce their stress through community building, we knew from the beginning that we wanted to use a collaborative design process. From here, we chose to conduct two participatory design sessions. The first session took place after initial brainstorming and ideation, and was intended to refine our initial idea for a prototype. The session took place with four undergraduate students, from various years, colleges, and majors, who all had little to no design experience. These students were chosen as we felt they did a good job of representing the average student's goals and feelings, and embodying the average Cornell student. As they were not designers, we felt they could offer very unbiased opinions, that were not influenced by the politics of design, without thinking too much about things like design limitations. The students were each given a paper prototype of our Cassaro Connection app, and asked to make changes that they felt would improve the app. Some changes made include changing the ways in which events are recommended to the user, and adding new sort by functionality. These improvements were measured in terms of their ability to aid students in destressing (i.e. if the recommended event actually suited the users needs) and increase their likelihood of attending events.

After analyzing the results of our first co-design session, we realized that we had failed to take another crucial stakeholder's thoughts into account. As a result, we met with Denice Cassaro,

the creator and sender of these emails, as we felt she would have extremely valuable insight to offer. Recognizing her as an expert of these emails and events, we reached out to her to be a co-designer of our solution. We attempted to perform a co-design exercise with her as well, asking her to help us finalize important design decisions, and to seek out any blind spots we might have. In this instance, she was somewhat against participating, as she couldn't really get into it. She is happy with her current design and method of distributing this information, and doesn't have any desire to change it. She did, however, provide useful information about her goals and motivations in making and sending these emails, as well as explaining her methods of gathering the information sent in the emails. Denice noted that she focused her event collection used a few different metrics that influenced their curation. First and foremost, she is limited to the events that happening during a given week, and focuses on finding a balance between intellectual and entertainment events. She seeks to "stretch awareness" about what is happening on campus and in the greater Ithaca community. It is also important to note that Denice's emails are not part of her job description, and she sends them with the express purpose of building community and offering students a personal connection. In sending these emails, Denice cited a goal of giving students opportunities to hear "divergent opinions", gain "divergent experiences to share", and learn about "divergent backgrounds". This goal of giving students divergent exposure heavily influenced our next design iterations, and though we were unable to perform a true co-design with Denice, we were able to collaborate with an important stakeholder and gain valuable information, further guiding our design process.

#### *The Cassaro Connection App*

The final Cassaro Connection app embodied all the research behind it. The goal was to connect the gap between the problem of stress management and the solution through a community connection. Key features that differentiate the app include:



Figure. Co-Design session

1. Weekly Notifications: The user can opt-in to a weekly notification that serves as a reminder to attend one Cassaro event. This encourages students to use at least one day a week as a "rest day" to recuperate from stress.
2. Mood Slider: The mood slider terminology pivoted from an "extrovert/introvert" scale to a "loud/quiet" scale. Based on feedback from surveys, users felt uncomfortable with the binary division between extroverted and introverted.
3. Social Friends: In order to accommodate interests from female participants, we introduced a social feature to the app. According to responses, female participants would be more interested in events that friends attend.

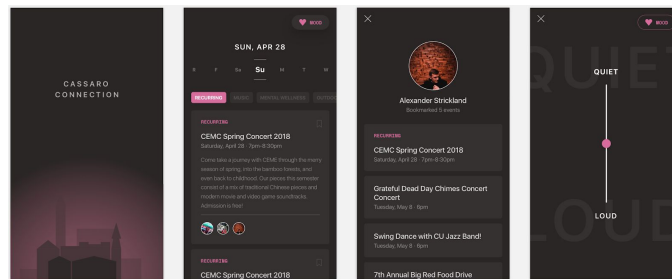


Figure. Cassaro Connection wireframes

The visual treatment of the Cassaro Connection app aims to elicit delight from users, encourage them to make the most out of the app, and opt-in to participate more in community events across campus.

### Iteration III: SOC 1865 Cornell University Community Connection

#### Non-design: An Unexpected Finale

After presenting our design solution in class, we received positive feedback on the visual aspects of the design. However, there existed a gap between our problem statement and our design solution. The purpose of Cassaro Connection was to facilitate a connection between students and the community, which would decrease academic stress. However, based on in-class discussion as well as Denice's input, we realized that solving the problem of stress management with community connection would not be accomplished with a mobile app. The problem was deeply rooted in the culture of a university setting and built into the very values of academic achievement. We then reflected on what we had done thus far, and how we could better apply what we had learned to an effective solution.

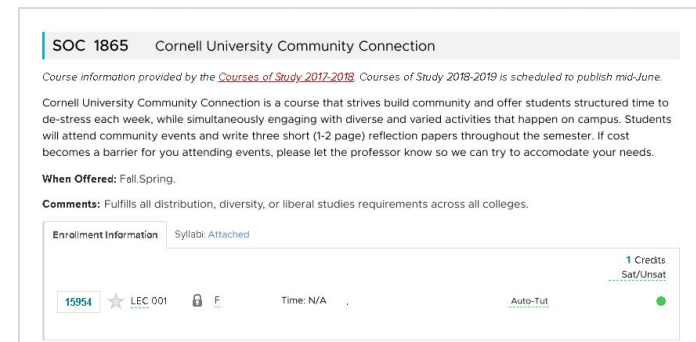


Figure. SOC 1865 course introduction

We developed a non-tech solution, as we felt this non-design better addressed the needs of our user. Our non-design solution is a 1-credit course that gives students an opportunity to de-stress through attending campus community events. The class would fulfill diversity requirements in each school, ask students to attend one event each week, and have them reflect on their experiences by writing three 1-2 page reflection papers.

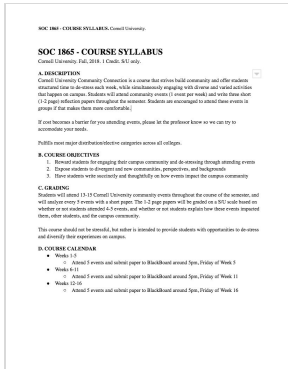


Figure. SOC 1865 course syllabus

We evaluated the success of this design by conducting various user interviews, in which we had users interact with the course as if it weuser tests with this newer iteration. Each person interviewed felt that it would encourage on campus participation and increase divergent exposures, benefitting their overall mental wellness.

## Discussion

The journey to our final design decision was long and arduous, but it unexpectedly taught us about the values in non-design and reflection. While the methods we sought out to explore were Co-Design and Feminist HCI, we found the most value in the nebulous ideas of reflecting and non-designing. Though these various design research methods seem to span different purposes, they really served to complement one another in achieving our final design solution for the problem space.

## Conclusion

The Cornell University Community Connection course aims to help users alleviate stress through connecting them to communities and motivating them in the process of building a strong support networks. It is our hope that Cornell University Community Connection can provide users a new alternative of relieving stress and maintaining mental wellness despite the constant external pressure they receive from different aspects of their lives. Future work will concern deeper analysis of how the concept of community connection can expand beyond the a course concept and translate into other designs that can help not only the college students, but also other demographics.

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