Transforming Anxiety From Stigma to Understanding: A Design Case Study of *Anocity*

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ARTG 5000: Design and Mental Health

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April 22, 2025

Generalized Anxiety Disorder (GAD) has been included in the Diagnostic and Statistical Manual of Mental Disorders (DSM) since 1980, however, recent years have witnessed a significant societal shift in the perception of GAD, with an increasing recognition that those affected by it deserve and require proper care and treatment. This shift, primarily influenced by conversations on social media initiated by mental health professionals and now embraced by a wider audience sharing their personal experiences, marks a crucial step in the fight against the stigma surrounding mental health treatment. Despite this progress, a substantial stigma about mental health treatment persists, with many individuals still downplaying the severity and impact of anxiety symptoms on their daily lives, known as "self-stigma."

II. Understanding the Problem: Generalized Anxiety Disorder and Stigma

In this paper, I expanded my research on Generalized Anxiety Disorder to address a broader societal issue: the enduring stigma that hinders many from seeking help for their anxiety. This stigma takes various forms, from internalized beliefs about mental weakness to societal confusion about anxiety disorders, and poses significant barriers to diagnosis and treatment. Notably, "while discourses on social media were initially aimed at destigmatizing mental health, there has been a notable shift towards romanticizing mental illness, including the creation of memes and content glamorizing conditions such as anxiety" (Issaka et al., 2024). This cultural shift has complicated efforts to address anxiety meaningfully, necessitating approaches that neither stigmatize nor romanticize mental health challenges. Recognizing how these stigmatizing beliefs isolate and discourage those experiencing anxiety, I designed *Anocity* as a mobile application that deliberately subverts traditional

clinical approaches, offering instead a curiosity-based framework that makes anxiety exploration feel like self-discovery rather than treatment.

It was essential to me that the app was not limited to people with a GAD diagnosis, but instead for anyone who struggles with daily anxiety and has an interest in learning more about their anxious habits. I quickly discovered that my app would target people who read self-help books. People who purchase a self-help book are typically optimistic and curious about learning more about themselves. Drawing on a theoretical framework supported by empirical evidence from Brewer's (2021) *Unwinding Anxiety: New Science Shows How to Break the Cycles of Worry and Fear to Heal Your Mind*, I established "curious awareness" as the core foundation and framework of *Anocity.*

Reading Brewer's book gave me a new way to interpret anxiety through a simple framework: being curious about your anxious thoughts. By looking at anxiety in patterns, a person can understand that our brains learn through associations, and experiencing high levels of anxiety is just an unhealthy association or habit to which the brain responds. Whether diagnosed or not, GAD permeates every aspect of a person's life. Each conscious thought connects to an anxious habit loop that automatically triggers behaviors, inevitably perpetuating the cycle. Investigating these everyday patterns has furthered my interest in unveiling how anxiety is rooted deep within our self-concept and self-esteem. This finding prompted me, as a designer, to devise an application that provides an initial guided experience for individuals suffering from anxiety, empowering them with a better comprehension of their minds and a greater degree of authority over their anxiety. While *Anocity* does not serve as a form of treatment, its primary focus is to provide users with a non-judgmental self-awareness of their habits.

III. Theoretical Foundation: The Curious Awareness Framework

The “curious awareness” framework, inspired by my research on the neurobiological basis of the posterior cingulate cortex (PCC) and its comparison to traditional 'forced control' approaches and model-based versus model-free learning systems, is the core of *Anocity*. It encourages users to observe their anxiety without judgment, fostering a mindset of curiosity and understanding rather than control and suppression.

Anocity is approachable and easy to use, as users develop an understanding that all they need to do is simply listen and create a map of their mental patterns. By focusing on observation rather than intervention, *Anocity* transforms anxiety from something to be fixed into something to be understood. Reframing anxiety as a tool is what I ultimately hope users will discover through my app. Appendix Figure 1 illustrates the main interface of the Anocity app. The navigation bar offers a precise categorization of the curious awareness model, showing the four primary sections of the application: Home, Habits, Mapping, and Reflect. This model reflects my intuition about how users will interact with the application as they progress through various stages, ranging from initial discovery to forming an anxious habit, mapping, and reflection.

IV. Design Solution: Anocity App Core Components

The relationship between mindfulness and anxiety is often misunderstood, as it does not involve emptying the mind of all negative thoughts. Instead, mindfulness focuses on altering our perception of our thoughts and feelings, creating space for observation without judgment. However, understanding this conceptual approach is one thing; implementing it in daily life is another. This is where I implemented data visualizations (Appendix Figure 3) to

guide users in understanding their anxiety through circular loops that are not labeled as negative or positive but as observations.

To achieve this, I organized anxiety into four domains:

- Thoughts (common patterns, worry about the future, mind going blank)
- Physical sensations (body responses, muscle tension, racing heartbeat)
- Behaviors (action patterns, procrastination, over-preparation)
- Emotions (feeling states, fear/nervousness, overwhelm)

As shown in Appendix Figure 2, the Habits page is designed to guide users and can be customized to meet their needs. Each domain of anxiety includes example experiences to help users begin questioning and exploring where their anxiety "hides" in their everyday lives.

Appendix Figure 2 displays an example questionnaire within the “Thoughts” domain, specifically "Worry about future events." Each category within the domain includes five simple, unchanging questions answered with "Yes," "No," or "Maybe," or using a 1-5 scale to explore initial responses further. For example, the first question in this category asks, "Do you know how to make the worry stop?" This potentially challenging question may evoke emotions during the questionnaire if anxiety is present, which is where the Reflect page becomes essential.

While the app does not force users to complete reflections, they are highly encouraged because it provides understanding and powerful visualizations that represent the user's progress towards “curious awareness.” Once users complete their reflection, they are directed to the Mapping page, where they see a purple circle indicating a completed curious observation with a dart on the outside of the ring representing their reflection.

V. Design Choices and Rationale

I enjoyed expressing my background as an interaction design major in the creation of the app, I didn’t want the app to have a clinical feel, but instead artistical express anxiety in a way I havent seen before. Using language like "thoughts" and "behaviors" instead of "symptoms" was crucial because I wanted every user to have a holistic perspective that anxiety does not define a person. I saved the visual design and aesthetics for the end of my creative process, ensuring that they only enhanced the user experience instead of hindering it with decoration.

Color psychology played a significant role in the process, using pastel colors such as purple, green, yellow, and blue, I intended to create a general experience that soothed worry. I particularly avoided using red due to its connotations associated with errors or failure.

The tracking and visualization system was challenging to create because I wanted to transform this concept into a visual representation, using these anxious color rings as a dartboard, with reflective comments being darts thrown at this target. This design choice is supported by Yael Millgram's research at Hebrew University: "When we are sad or anxious all the time, that sadness or anxiety becomes familiar, a place that we gravitate toward, something like a morning routine or a regular route to work" (Brewer pg. 89). I want the user to understand how anxiety can be simplified into a dartboard visualization, where each logged reflection represents an act of conscious observation rather than an attempt to eliminate the familiar pattern.

By creating this dartboard visualization concept (see Appendix Figure 3), I aimed to develop a method for presenting progress in a non-linear manner, zooming-in and out to build perspective. My goal was to encourage users to return to the app out of their interest in self-improvement, making this motivation the core of the visualization concept. I revisited

my research on shifting anxious behaviors using PCC deactivation; I designed the rings to protect against these automatic, model-free reactions.

A non-curious mind has no protection against anxious thoughts, sensations, and behaviors. In contrast, while a curious person still experiences the same anxious thoughts, sensations, and behaviors, their understanding and acknowledgment of these experiences retrain their brain to think curiously before reacting to uncertainty. The concentric circles thus represent both a visual metaphor for protection and a practical tool for building awareness over time.

VI. Breaking Stigma Through Design

Brewer explains why this framework succeeds as a positive reinforcement loop, noting that "sometimes reflecting with hindsight is a better time for learning because you are less emotionally affected" (Brewer 127). This framework remains effective whether someone is reflecting on a past, present, or future experience. Appendix Figure 4 displays the Reflect page, a personal journal where users can review their previous entries in detail.

The color differentiation is intentional; I want users to eventually log all four domains of anxiety, creating as many protective rings around their minds as possible. Some may be aware of their anxious thoughts but have never paid attention to their physical sensations or other aspects of their experience. Brewer even notes how understanding the present can help identify past moments that weren't previously recognized as anxiety triggers. The app's design transforms the stigmatized perception of anxiety into an opportunity for growth and self-understanding, making anxiety exploration feel like a journey of self-discovery rather than a weakness to overcome.

VII. Expected Mental Health Impact

To conclude, I expect *Anocity* to have both short-term and long-term mental health impacts; however, users will not fully adopt the "curious awareness" framework without sustained engagement. Every design element in *Anocity* deliberately breaks stigma and validates individual experiences through a customizable tracking system paired with visualization tools. Through my research, I was able to integrate principles from neurobiological research, mindfulness-based stress reduction, and reward-based learning, all of which are supported by Brewer's research on anxiety habit loops and PCC activation. The mapping and reflection features mirror therapeutic journaling practices, while the four-domain model corresponds to established cognitive-behavioral conceptualizations of anxiety.

If I continue working on this project, I would like to receive input from mental health practitioners to evaluate each questionnaire and the overall domains, ensuring that the app successfully enacts its stated purpose. Future developments for *Anocity* could include integration with wearable devices for physical sensation tracking, expanded resources for mindfulness and meditation practices, and clear pathways for users who recognize their anxiety requires professional intervention. These enhancements would strengthen *Anocity's* role as a bridge between initial awareness and formal therapeutic support.

References

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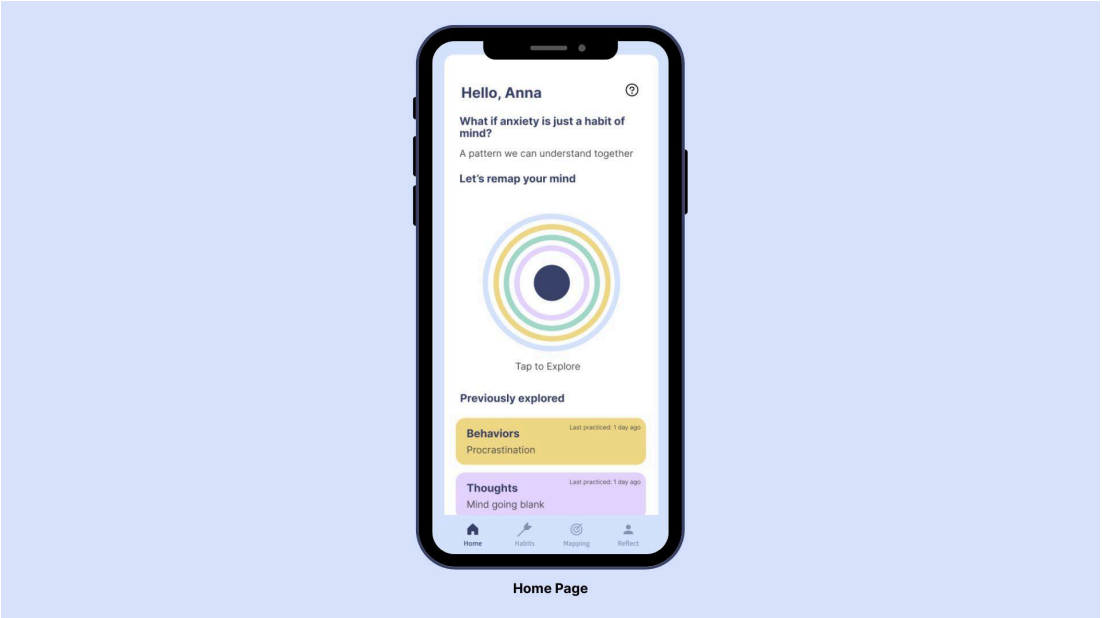
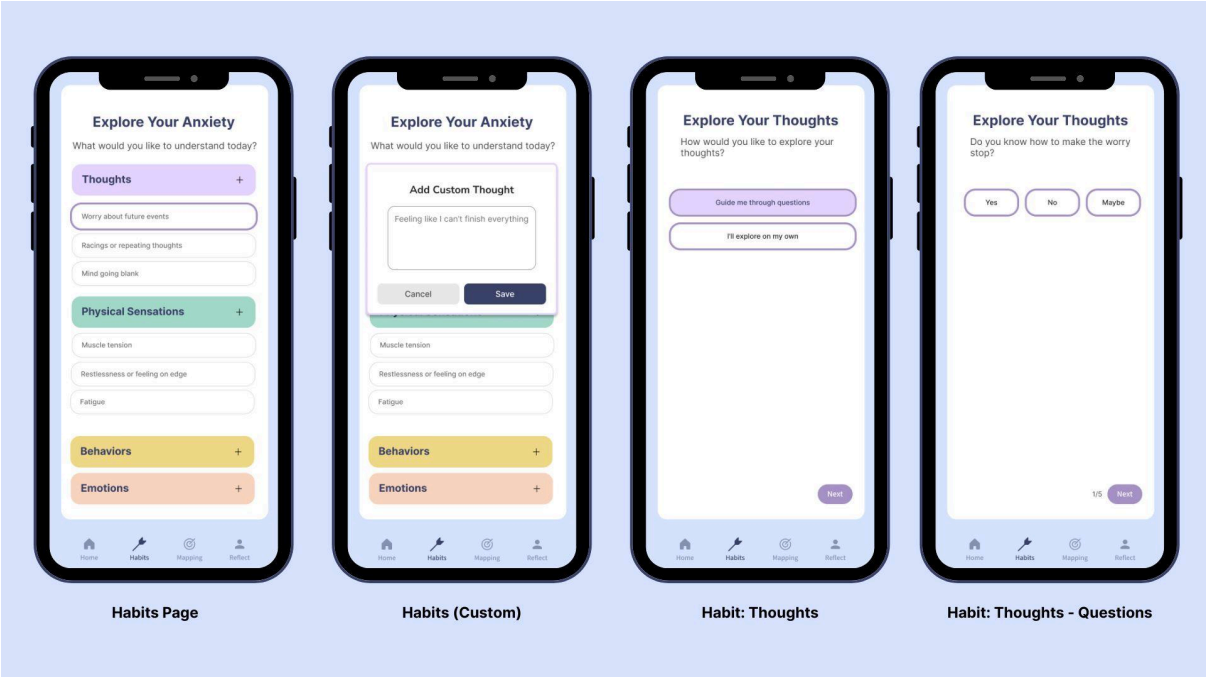
Appendices

Appendix Figure 1: Home Page



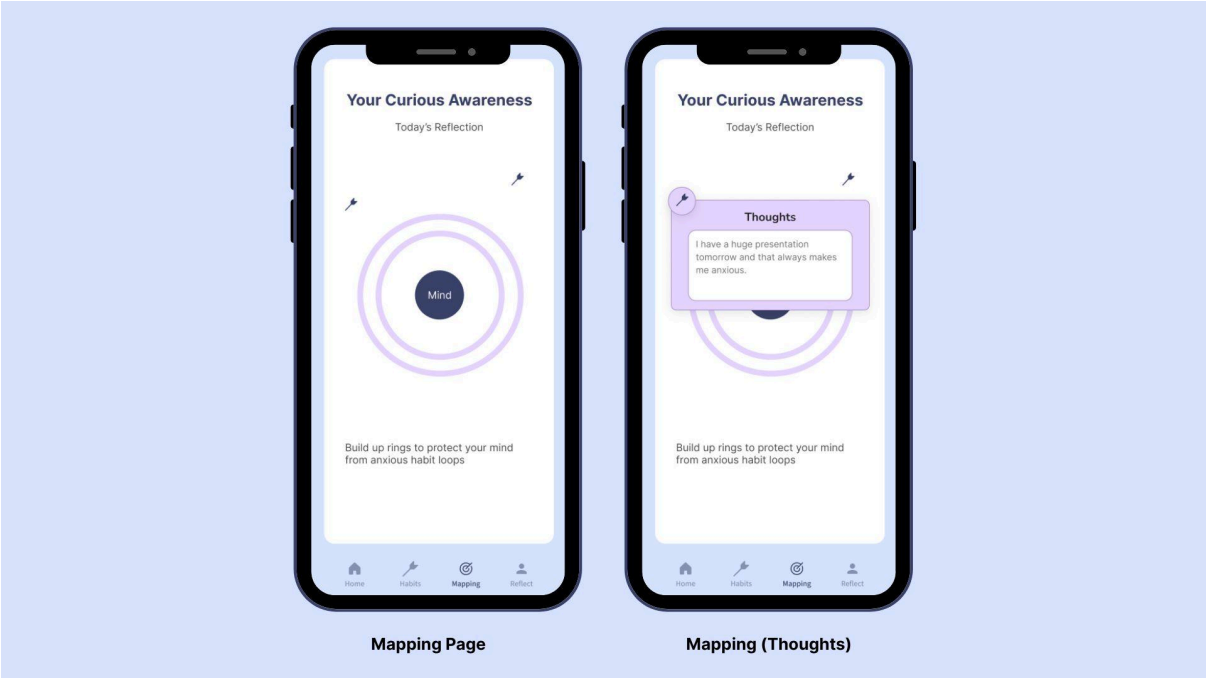
Home Page

Appendix Figure 2: Habits Page



Habits Page | Habits (Custom) | Habit: Thoughts | Habit: Thoughts - Questions

Appendix Figure 3: Mapping Page



Appendix Figure 3: Reflecting Page

