# Case Study: Mirror

Digital Tools for Youth Mental Health Leadership Summit National Academy of Sciences

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## **Child Mind Institute**

The Child Mind Institute is dedicated to transforming the lives of children and families experiencing mental health and learning disorders through excellence in science, care, and education.

We've become the leading independent nonprofit in children's mental health by providing gold-standard evidence-based care, delivering educational resources to millions of families each year, training educators in underserved communities, and developing tomorrow's breakthrough treatments.





### **Child Mind Institute: Our Approach**

We operate in three Mission Areas that work together for greater impact: **Science, Care, and Education**. Our unique approach is not only innovative — it is scalable. We don't just intervene, we prevent.

#### Care

- •We have treated **15,800+ patients** from **49 states** and 45 nations.
- More than three-quarters of the children we have served received free or reduced-cost services.

#### Education

- •School-based programs have reached **2.4 million students, educators, and caregivers** in more than **9,000 schools** throughout the U.S.
- Each month, **2 million unique visitors** access childmind.org for credible, evidence-backed information for their children.

#### Science

- Researchers in **3,335 cities** worldwide have published **1,289 articles** using our open science data sets.
- •Over **3.6 million people** have gained insight into a child's behavior using our online Symptom Checker.



Adolescents need improved access to mental health support that meets them in their moment of need -- anywhere, anytime.



42% of adolescents reported persistent feelings of sadness or hopelessness within the last year<sup>1</sup>



Yet only 17% of teens have seen a mental health professional in the last year<sup>2</sup>



Over 70% of youth have had a journaling habit within the last year, but rarely remember where to turn in moments of crisis<sup>3</sup>

#### The benefits of journaling on mental and physical health are well documented

#### Improved emotional and physical health:

Regular journaling enhances mood and emotional awareness and reduces stress levels (Baikie & Wilhelm, 2005).

#### Boosted immunity:

Writing about traumatic experiences can improve immune function by boosting lymphocyte activity, a key component of the immune system (Pennebaker, Kiecolt-Glaser, & Glaser, 1988; Stanton et al., 2008).

#### Lowered blood pressure:

Journaling helps lower blood pressure by reducing stress and promoting relaxation, supporting cardiovascular health (Baikie & Wilhelm, 2005).

#### Improved sleep quality:

Writing a gratitude journal before bed can clear the mind, alleviate worries, and improve sleep by helping people fall asleep faster and experience fewer disruptions in the middle of the night (Digdon & Koble, 2011).

#### RLOG

# The Power of Journaling: What Science Says About the Benefits for Mental Health and Well-Being

January 28, 2025

You might have kept a diary at some point in your life to record your thoughts or details about your day. But did you know that this simple practice of putting pen to paper has decades of scientific backing as a tool for mental health and personal growth?

#### BLOG

# Beyond the Mood Boost: How Journaling Rewires Your Brain for Resilience

February 19, 2025

At the Child Mind Institute, we are dedicated to understanding how the brain develops — and identifying ways we can support children and adolescents in building mental health awareness and resilience. We know that the teenage years can be a particularly challenging time filled with big emotions, academic pressures, and social complexities. That's why we have developed Mirror, a digital journal app designed to make journaling more accessible and impactful.

Studies have shown that expressive writing — which involves writing about emotional experiences — enhances neural processing in areas related to cognitive control and memory (DiMenichi et. al., 2019). This isn't just about feeling better in the moment, but building long-term mental and emotional strength.

Think of the brain as a network of interconnected pathways. The more you use a particular pathway, the stronger it becomes. Journaling is like exercising the brain's emotional regulation "muscles."

#### **Taming Big Emotions**

Journaling — especially through expressive writing — can be a powerful tool for managing intense emotions. Studies suggest that putting feelings into words may help with cognitive reappraisal, or the process of reframing a situation to lessen its emotional impact (Lieberman et al., 2011). This likely involves the prefrontal cortex, the brain's control center for planning, decision-making, and emotional control.

While more research is needed on specific functions in the brain related to the positive benefits of journaling, the act of writing about experiences appears to help connect emotions with rational thought. This promotes better emotional regulation over time and helps people to express their feelings with words.

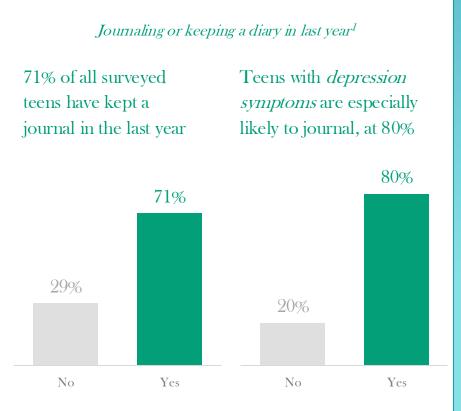
#### **Building Self-Awareness**

Journaling encourages introspection, helping teens understand their motivations, values, and triggers. This self-knowledge is crucial for making healthy choices and building

71% of teens already journal in some form. For teens with depression, the number is even higher.

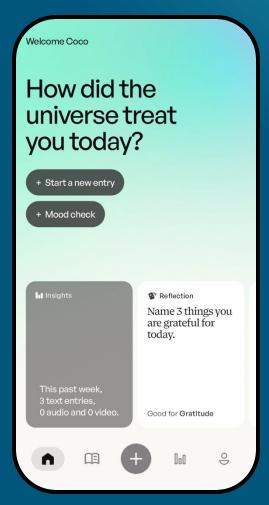
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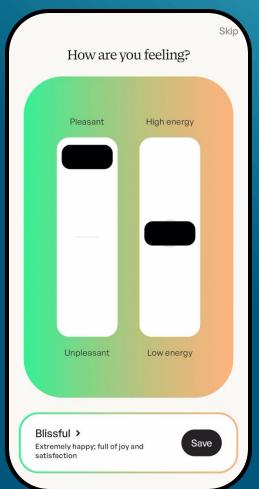
Writing in the Notes app helps me extinguish my spiraling thoughts...When I'm reminiscing about sad things and my thoughts go 100 miles per hour, writing helps me get them out." - Angela (15, LA)



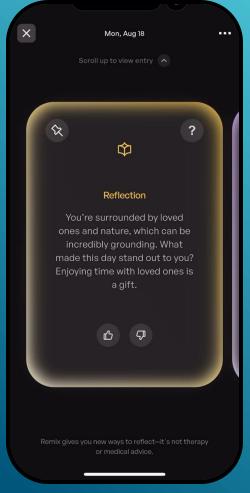
Source: ReD Associates Teen Mental Health Survey. 1. JO URNAL\_BASE2: "In the last year, have you written in a journal or kept a diary? Note: Journaling can take many forms, including pen and paper books, notes on the phone, apps such as Day One or Daylio, audio/video recordings, or a sketchbook." N=1506. Depression symptoms = mild-to-severe as determined by PHQ-A score.

Mirror is a journaling app designed to enhance emotional processing while providing a supportive environment for youth.

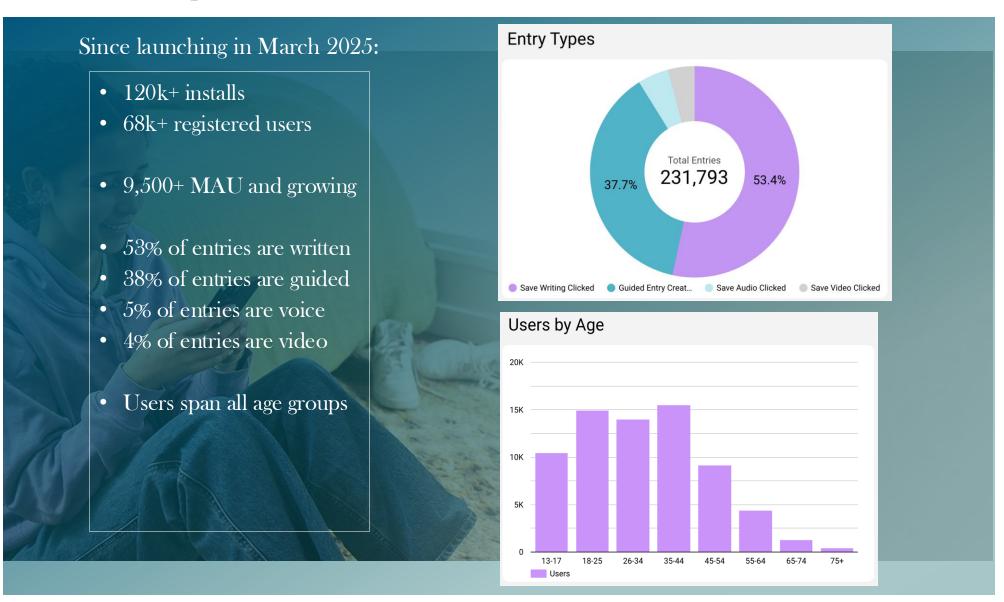




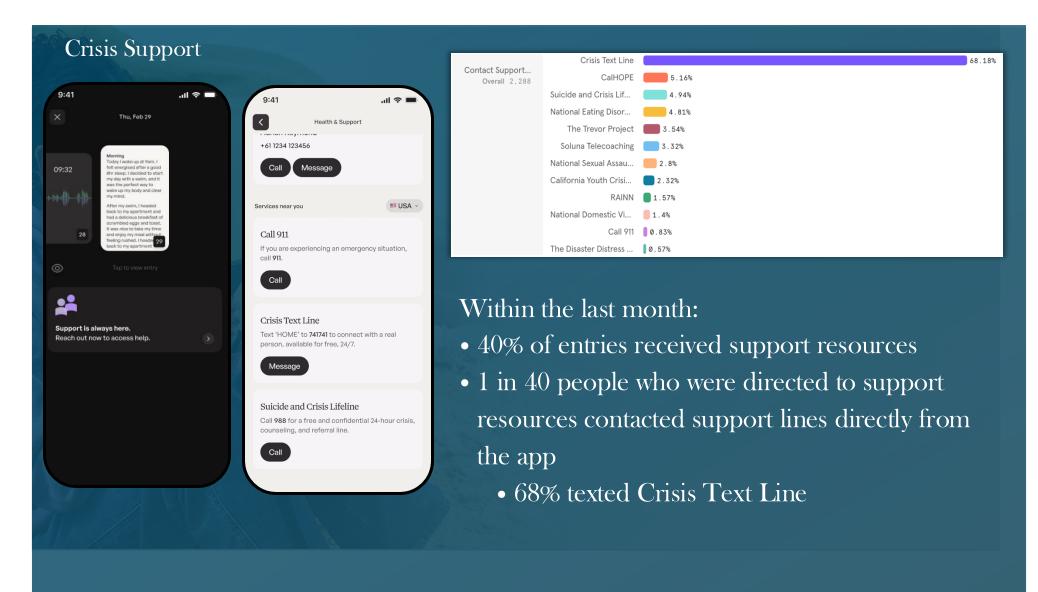




# Mirror adoption and engagement (3/25-11/25)



# Mirror is helping people connect to support - and saving lives



# The metric that matters most? Saving a life

# "Mirror helped save my life."

-Jada (18), Los Angeles, CA





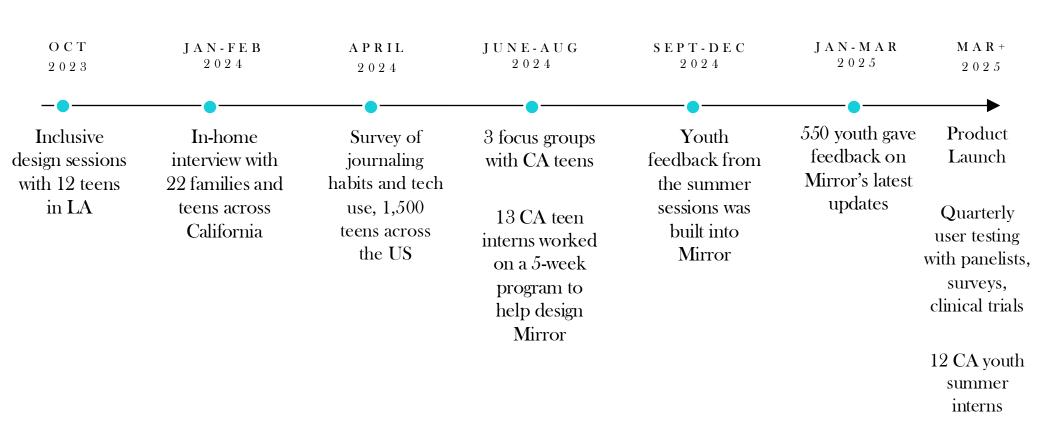
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Device: Samsung Galaxy S25 C Device language: English App version code: 171 App version name: 1.3.11 Android version: Android 15 (SDK 35) C



This is by far the best app for journaling your feelings. There's so many different writing prompts to choose from or you can just write, talk or video your entry. I love how it's free and has no ads whatsoever. You also set your mood daily and after every entry so you can look back over a week, month, year etc.. As a lifelong sufferer of anxiety, pani attacks and ADHD, this is exactly what I need when I just need to get the feelin gs out. Thank you Mirror.

# Over 4,000 youth were involved in the creation of Mirror





# Meet Hannah Sykes

- 2nd-Year Psychology and Neuroscience Major at UC Berkeley
- Completed two-year summer internship program with Youth Mental Health Academy
- Interned with the Child Mind Institute for the Next Generation Digital Therapeutics Team (with 12 Mirror Interns)
  - Worked on implementing new guided journaling prompts to enhance user engagement and promote more structured self-reflection
  - Reviewed UX survey feedback to highlight specific user needs (categorized observed themes)
  - Mapped feedback to changes in guided journaling feature (easy organization and navigation within the app)
  - Designed novel evidence-based prompts based on existing therapeutic modalities
  - Conducted literature review on effective therapeutic techniques for anxiety and depression

# User Feedback as Clinical Insight: Improving Digital Journaling for Anxiety and Depression

Hannah Sykes
Supervised by Michael Leyden and Julia Trabulsi
Next Generation Digital Therapeutics Team





# Reflect with guided prompts How did someone in your life show you kindness? What did you learn today? Reflection Reflection 0

# **Guided Prompt Feature in Mirror**

#### How can we improve this feature?

- At the time of my internship, there were only 55 guided prompts available on the app -> More variability in prompts
- Increase types of prompts based on user feedback and expressed needs: Is there a demand for more creative and fun prompts or deeper reflection?
- Instead of tagging prompts, place them in categories for easier search



# Design New Guided Journal Prompts

In Mirror, there is a **remix feature** after each entry is created that you can scroll down to that transforms journal entries into emotionally supportive, creative reflections. **Each remix lens is based on a different therapeutic approach.** 

• Gaining inspiration from this feature, we created new guided journal prompts which are similarly informed by therapeutic techniques, for more engagement











# **Literature Review**

## **Informing the Development of New Prompts**

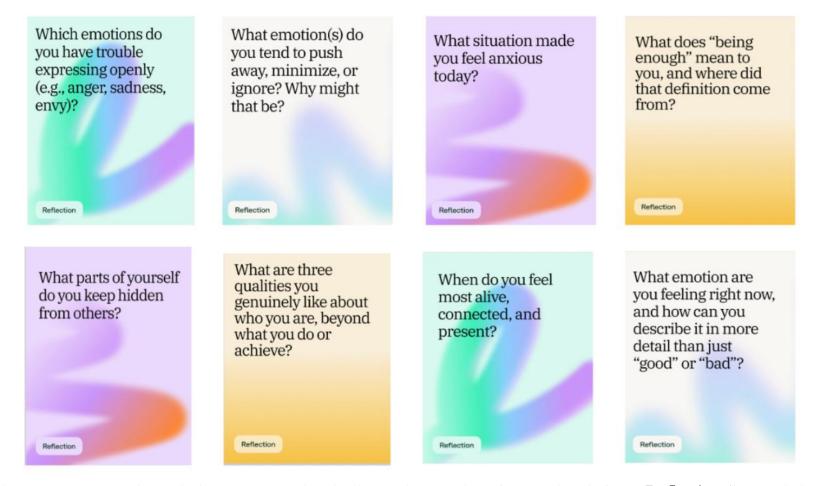
Reviewed key publications outlining key elements of the different therapeutic modalities that inspired the Remix feature, including:

- Cognitive Behavioral Therapy
- Behavioral Activation Therapy
- Humanistic and Person-Centered Therapy
- Emotion-Focused Therapy
- Insight-Oriented and Psychodynamic Therapy

From this literature review, I prepared prompts and questions inspired by each of the therapeutic approaches.



#### Guided Prompts Informed by Therapeutic Techniques



All of these prompts can have their own categories similar to the Remixes feature they inform: **Reflection** (humanistic and person-centered), **Clarity** (Emotion-Focused Therapy), **Discovery** (Insight-Oriented and Psychodynamic Therapy), **Perspective** (CBT), and **Growth** (Behavioral Activation Therapy)

# Call To Action: Help Us Scale and Integrate Mirror's Resources and Crisis Support Where It Is Needed Most

- Contact us for partnerships and customizable enterprise solutions
  - <u>david.anderson@childmind.org</u>
  - <u>mirrorsupport@mindfultherapeutics.org</u>
- Download Mirror, try it for yourself, and share Mirror with youth who may need it
- Instagram: @JournalwithMirror
- LinkedIn: Mirror: Journaling & Insights
- TikTok: @MirrorJournal



Scan to download!

