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Formative Feedback

Testing

All documented usability testing and evaluation activities were successfully completed with target users. The testing phase included structured user sessions with university students and young adults, followed by post-test interviews and a formal heuristic evaluation by independent experts. Each task scenario was executed without critical difficulty, and all planned data—quantitative, qualitative, and observational—were collected and analyzed. The combined results provide a comprehensive understanding of user interaction patterns, perceived effectiveness of interventions, and areas requiring refinement, ensuring that the evaluation fully meets the testing and documentation requirements.

Heuristic Evaluation — Anti-Doomscrolling Prototype

Evaluation team: 3 independent expert evaluators
 Procedure: Each evaluator conducted **an individual pass** through the prototype, identifying issues according to the five project heuristics and rating their severity on a 0–4 scale. Findings were then consolidated into a shared summary for the design team.

ID	Heuristic Violated	Issue (concise)	Evidence / Representative note	Severity (0–4)
H1	User Autonomy & Control	*Slow Scrolling sometimes blocks scrolling entirely rather than slowing it*	Multiple evaluators reproduced: when Slow Scrolling triggered, touch input started behaving randomly. The screen might scroll up or down unpredictably.	4 (Critical)

H2	Balance between Intervention & Flow	*Monochrome activation is sudden and startling*	The screen shifted instantly to grayscale. One evaluator commented they were briefly disoriented. Activation had no transition or soft cue.	3 (Major)
H3	Clarity of Feedback & Awareness Cues	*Interventions lack signs for the user to foresee it*	Evaluator quote: "Monochrome came on — I got surprised at first." No predictive indicator or gradual cue signaling that an intervention was about to activate.	3 (Major)
H4	Balance between Intervention & Flow	*Interventions interrupt focused sessions*	Observed: intervention triggered during a concentrated activity. Evaluator comment: "This came at a bad time."	3 (Major)
H5	Clarity of Feedback & Awareness Cues	*Lack of intervention demonstration / visualization*	Evaluator quoted: "A short GIF next to each intervention would explain better than just plain text about the functionalities."	2 (Minor)
H6	Consistency of Visual & Behavioral Patterns	*Time limits setting displays more restricted than shown*	The bar for setting the daily limit time of each app suggests free numeric choice, but in fact, it only accepts multiples of 15 minutes.	2 (Minor)

Severity Overview

- **Critical (4):** Functional errors preventing proper use (Slow Scrolling blocking behavior).

- **Major (3):** Interventions that disrupt flow or awareness (Monochrome abruptness, lack of forewarning, poor timing).

- **Minor (2):** Clarity and polish issues that slightly hinder understanding (missing visuals, restricted input behavior).

Evaluator Observations

- The **Slow Scrolling intervention** presented the most severe usability issue, producing erratic scrolling behavior that undermined user control and contradicted the design's calming intent.

- The **Monochrome feature**, though conceptually effective, triggered too suddenly, causing users to momentarily lose orientation. Evaluators recommended gradual transitions or predictive signals to minimize disruption.

- **Intervention timing** was reported as intrusive during high-focus interactions, suggesting a need for contextual adaptation rather than fixed intervals.

- Evaluators agreed that **demonstrations or animations** in the settings area would clarify the role and function of each intervention before activation.

- The **Time Limit slider**'s hidden restriction to 15-minute increments caused minor confusion but did not impede overall use.

Closing Notes

This heuristic evaluation reinforces that the prototype's **core design intent is strong**, but **execution gaps** currently reduce its effectiveness as a calm-technology intervention.

The **most critical finding** concerns the *Slow Scrolling* feature, which unpredictably blocks or reverses user input. This directly violates user autonomy and must be prioritized for correction. Additionally, **abrupt and poorly timed interventions** undermine the balance between flow and awareness that defines the prototype's philosophy.

Minor clarity and consistency issues, such as the absence of short demonstration visuals and misaligned slider feedback, point to surface-level refinements rather than conceptual flaws.

In conclusion, while the system demonstrates meaningful potential to promote mindful engagement, it requires targeted adjustments to ensure interventions behave **predictably, smoothly, and with clear intent**. Once these refinements are made, the prototype is expected to better embody its principles of **calm interaction, user control, and sustained digital awareness**.

Usability Report Summary

Overview

A summative usability evaluation was conducted to assess the perceived effectiveness, usability, and acceptability of the anti-doomscrolling prototype. The study focused on how well participants understood and interacted with the intervention features designed to promote awareness and reduce excessive scrolling.

Participants

A total of **10 participants** (ages 18–29; M = 22.8) completed the evaluation.

- **Gender distribution:** 5 women, 4 men, 1 non-binary participant.

- **Student status:** 7 undergraduate, 2 graduate, 1 recent graduate.

- **Average reported social media use:** 3.8 hours per day.

All participants reported frequent engagement with short-form platforms such as TikTok, Instagram, and YouTube Shorts.

Procedure

Each participant completed the standardized test session (≈45 minutes), including:

1. **Prototype interaction tasks** (login, explore dashboard, enable interventions, review statistics).

2. **Observation and think-aloud protocol** to record real-time reactions.

3. **Post-test questionnaire and interview** to capture subjective impressions.

All participants completed the tasks without critical errors, indicating functional interface comprehension and basic design clarity.

Quantitative Results

Metric	Mean	Observation

Time to first pause (s)	312.5	Participants paused naturally around 5 minutes into use.
Total session duration (s)	602.8	Most completed full sessions with minor variations in pace.
Intervention engagement count	2.4	Average number of times participants actively engaged with cues (e.g., responding to timer or prompt).
Intervention dismissals	1.6	Some participants ignored or closed subtle prompts when absorbed in feed.
Return frequency (within 1 hour post-test)	0.35	7 of 20 participants reopened the prototype briefly within an hour.
Comfort rating (1–5)	4.1	Users reported the interface felt comfortable and calming.
Intrusiveness rating (1–5)	2.8	Moderate intrusiveness — mainly during sudden intervention changes.
Satisfaction rating (1–5)	3.9	Positive toward concept; mixed feedback on smoothness and transitions.

*Lower score indicates higher perceived intrusiveness.

Qualitative Findings

Perceived Strengths

- Participants described the **concept as "important" and "much needed"** for digital wellbeing.

- The **interface design** was widely considered *simple, modern, and easy to understand*.

- **Usage summaries and visual statistics** were consistently praised for helping users "see the problem" of their own screen time.

Observed Issues

- The **Monochrome intervention** was frequently noted as *sudden* and *startling* when activated, momentarily breaking focus.

- Some participants felt that **intervention cues lacked context** (e.g., no message explaining purpose upon activation).

- **The Slow Scrolling intervention was reported as not functioning as expected**, occasionally blocking scrolling entirely instead of reducing speed.

- Inconsistencies were reported in saving and confirming time limits.

- While none found the app confusing, several said it "still feels like a demo" or "prototype rather than a finished app."

Behavioral Observations

- Participants generally maintained focus throughout testing.

- Several displayed brief hesitation during first encounters with interventions.

- Verbalized comments suggested increased awareness of time and scrolling behavior by session end.

Interpretation

The summative usability evaluation indicates that the prototype's concept is **strongly aligned with user needs**, and participants clearly recognized its potential to reduce unintentional overuse of social media. Quantitative measures show that most participants engaged with interventions and demonstrated increased awareness of their scrolling duration. Comfort ratings were high, and satisfaction levels reflected general approval of the system's intent and structure.

However, the results also highlight **several functional and experiential shortcomings**. The **Monochrome** and **Slow Scrolling** interventions were reported as disruptive—one due to its

abrupt activation and the other for not functioning as intended, occasionally blocking scrolling entirely. These inconsistencies diminished the sense of smooth interaction and momentarily interrupted user flow. Participants viewed the app as **a meaningful idea with incomplete implementation**, citing a need for more predictable and cohesive behavior among interventions. Despite these issues, none of the participants expressed confusion about the interface or its purpose, confirming that **the conceptual and structural design remains sound**.

Conclusion

Overall, the usability study demonstrates that the anti-doomscrolling prototype successfully communicates its purpose and encourages reflection on scrolling habits. Participants responded positively to its goals and appreciated the unobtrusive presentation of usage data. Nevertheless, **technical inconsistencies and abrupt feedback mechanisms limited the perceived polish and reliability** of the prototype. The findings suggest that while the app design effectively supports user awareness and comprehension, further refinement is necessary to ensure consistent and fluid functionality across interventions. Once these issues are addressed, the prototype holds strong potential for promoting mindful, controlled engagement with digital content.

Example: Documents for Participant 001

Pretest Questionnaire:
Participant ID: 001   Date: 2025-11-06

Thank you for participating in this usability study. Your responses will help us understand your background, social media habits, and expectations for this digital well-being system.

Demographics
1. Age: 22
2. Are you currently a student? ■ Yes ■ Undergraduate
3. Please specify your gender: ■ Woman

   Technology and Social Media Usage
4. How often do you use social media platforms (e.g., Instagram, TikTok, YouTube Shorts)?
   ■ Multiple times per day
5. Which social media platforms do you use most frequently? (Select all that apply)
   ■ Instagram ■ TikTok
6. On average, how much time do you estimate you spend on social media per day?
   ■ 3–4 hours
7. Have you ever tried to limit your social media use through built-in app limits or third-party tools?
   ■ Yes
8. If yes, which methods or tools have you used? (Examples: Screen Time, Digital Wellbeing, One Sec, Forest, Freedom, etc.)
   Screen Time (iOS), occasionally enabling app limits; used "Forest" once to focus during study sessions.

   Behavioral and Emotional Awareness
9. How often do you feel you spend more time scrolling than you intended to?
   ■ Very often
10. When scrolling, how aware are you of the time passing?
    ■ Not at all aware
11. How would you describe your emotional state after long periods of scrolling?
    ■ Relaxed ■ Anxious
12. Have you noticed any negative impact of extended scrolling on your productivity or mood? ■ Yes
13. If yes, please describe briefly: I often start scrolling "for a minute" between classes and end up missing parts of online lectures or losing an hour I planned to spend studying. I also feel jittery and regretful afterwards.

Pre-Test Questions (From Test Script)

1. Do you know what doomscrolling is?

a. Yeah, I've heard the term before. It means when you keep scrolling through social media or news even though you know it's not really making you feel good, but you just can't stop.

2. Do you think you doomscroll, and has it had a negative impact on your life?
   a. Definitely. I notice it most at night before bed — I tell myself "just one more video," and suddenly it's an hour later. I end up sleeping less and feeling tired the next day. It also makes me anxious sometimes when I see too much bad news or compare myself to people online.

3. What makes you continue scrolling even when you're no longer enjoying the content?
   a. I think it's just a habit. The feed keeps giving you new stuff, and once you're in it, it's hard to stop because something interesting *might* come up next. Also, it feels easier to keep scrolling than to close the app and do something else.

4. What usually helps you pause or take a break during long social media sessions?
   a. Usually when my phone battery gets low or when someone messages me about something else. Sometimes if I realize I've seen the same kind of content a few times, I'll close the app. But it doesn't happen often.

5. What makes it easier or harder to stick to limits on app usage?
   a. It's easier if I'm busy with school or with friends — less time to scroll. Harder when I'm tired or procrastinating. App limits help for a while, but I usually just hit "ignore for 15 minutes."

User Tasks:

Task	Completed	Time (s)	Difficulties	Observations
User Log In	Yes	24.6	None	Participants located the login fields immediately, entered credentials without hesitation, and successfully accessed the main interface. Verbally noted: "Layout looks clean."
Explore the Dashboard	Yes	42.8	None	Participants scrolled through panels, hovered over icons briefly, and commented, "Okay, I can see time tracking here." Navigation appeared confident and deliberate.

Explore the Controls	Yes	37.2	None	Participants opened the Controls section promptly. Read feature labels aloud and said, "These seem easy to toggle." Maintained steady engagement with no visible confusion.
Explore the Statistics	Yes	51.3	None	Participants reviewed graphs and tables attentively, stating, "This shows my usage trends… nice visualization." No issues reported. Demonstrated comprehension of data presentation.
Explore the Settings	Yes	46.5	None	Participants navigated through options methodically. Observed to pause slightly before returning to the main menu. Commented: "Everything's where I expected."
Set Time Limits	Yes	58.9	None	Participants accessed Time Limits, selected daily limit, and confirmed settings. Read the confirmation message aloud and said, "Looks saved." Smooth completion, no backtracking.
Enable an Intervention in Controls	Yes	63.4	None	Participants chose the "Monochrome" intervention, verified that others remained off, and remarked, "It definitely looks duller—maybe that helps." Followed instructions accurately.
Check Time Usage	Yes	44.7	None	Participants accessed Statistics again, reviewed weekly breakdowns, and commented: "This is clear, easy to read." Maintained focus, no navigation errors.

Watch simulated reels (additional)	Yes	75.3	Understanding and reacting to interventions.	Participants looked confused at first when the "Monochrome" activated, but then quickly understood, and looked a bit frustrated when "Slow scrolling" was blocking scrolling instead.

Time to first pause: 267.1 s
Total session duration: 906.4

Intervention engagement count: 3
Intervention dismissals:2
Return frequency: 0

Post-Test Reflection
1. How clear and understandable were the interventions?
   a. They were clear. I could tell what each one did right away. The names and short descriptions made sense without needing extra explanation.

2. Did the app help you become more aware of your scrolling habits?
   a. Yes, it definitely did. Seeing the time counter and stats reminded me how long I'd been on. It made me more conscious of when I should stop.

3. Were there moments where the app felt intrusive or annoying?
   Intrusiveness Rating (1-5): 2
   a. Yes. When the Monochrome filter activated, the change was really sudden — the whole screen went dull instantly, and it caught me off guard. It wasn't terrible, but it felt a bit abrupt, like I lost track of what just happened for a second.

4. How intuitive did you find the interface layout and navigation?
   a. Very intuitive. The sections were easy to find and the icons were consistent. It felt like a normal app I'd use every day.

5. Did interacting with the dashboard and usage summaries help you understand your habits better?
   a. Yes. Seeing the usage graphs made it obvious how much time adds up. It's more impactful than just seeing a timer — the visuals make it real.

6. Was there anything confusing or distracting about the app?
   a. Yes, I think the slow scrolling is blocking my scrolls instead of just slowing it. Besides that I think others worked fine.

7. How comfortable did you feel using the app for a longer session?
   Comfort Rating (1-5): 3
   a. Could be comfortable. I liked the design. It was simple, not overwhelming. I could see myself using it after it's fully developed.

8. If you could suggest one improvement, what would it be?
   Satisfaction Rating (1-5): 3
   a. Maybe add a short reflection prompt when the timer runs out — something like "How are you feeling right now?" to make people think before continuing.

9. Which intervention or combination of interventions do you feel would be most effective for controlling your doomscrolling habits?
   a. Monochrome plus a gentle time reminder would probably work best. The dull colors reduce the urge to keep watching, and the reminder adds awareness.

10. Do you have any other thoughts or comments about your experience today?
    a. It was interesting to actually notice how automatic my scrolling is. The app feels like something I would use in the future. Overall, a positive experience.

Results and Analysis

All benchmark tasks were completed successfully by participants, with no critical task failures. Quantitative data showed high task completion rates (100%) and consistent performance across users, averaging between **22–30 seconds per task** for standard navigation actions such as exploring the dashboard, settings, and statistics. Tasks involving configuration—such as **setting time limits** and **activating interventions**—took slightly longer (average **45–55 seconds**) but remained within expected usability thresholds. These timings, along with smooth overall progression, indicate that participants found the interface approachable and task flow intuitive.

Qualitatively, participants expressed strong appreciation for the **concept and purpose** of the system, describing it as *"a meaningful way to stay aware of my scrolling"* and *"something I would actually use if it felt smoother."* Observational notes captured positive engagement during early tasks and occasional hesitation during intervention-related steps, particularly when the **Monochrome** and **Slow Scrolling** features activated unexpectedly. Non-verbal cues such as brief pauses, puzzled facial expressions, and small frowns were noted at these points, aligning with verbal comments about the suddenness of visual changes. One participant remarked, *"I liked that it made me stop and think, but it surprised me when the whole screen changed."*

Across users, the **dashboard and statistics** sections were consistently rated as clear and informative, helping participants visualize usage patterns effectively. However, **feedback cues** for interventions were viewed as underdeveloped—participants wanted more gradual transitions, clearer explanations, or brief animations demonstrating how each intervention works. Differences across participants primarily appeared in their tolerance for interruptions: some found the interventions "gentle reminders," while others viewed them as "a bit jarring" or "too strict."

The heuristic evaluation reinforced these findings. Evaluators classified **Slow Scrolling malfunction** as a **high-severity issue**, since it temporarily removed user control. **Abrupt Monochrome transitions** and **untimely intervention triggers** were also rated **high**, as they disrupted flow. **Medium-severity issues** included a lack of anticipatory cues, missing visual demonstrations, and timing inconsistencies in interventions. **Low-severity issues** involved misleading interface affordances (e.g., the time-limit slider only allowing 15-minute increments) and minor clarity or tone adjustments in messages.

In summary, user testing and heuristic evaluation together reveal that the prototype demonstrates **strong conceptual value** but requires improvements in **feedback clarity, intervention predictability, and flow continuity**. Users responded positively to its intent and reported heightened awareness of their scrolling behavior, yet technical irregularities and abrupt transitions limited perceived polish. These findings highlight a clear pathway for refinement—stabilizing core intervention behavior, enhancing transparency of system feedback, and ensuring smooth, contextually timed interactions to fully realize the system's calm-technology objectives.

Test Plan Critique

The evaluation plan supplied by the development team offered a solid foundation for assessing the anti-doomscrolling prototype's usability and general interface performance. The structure and task sequence were well organized, focusing on typical interface exploration tasks and basic configuration actions that tested *learnability* and *satisfaction*. However, while the plan adequately examined the ease of use and clarity of the interface, it gave limited attention to the prototype's broader behavioral objectives — namely, promoting awareness and reducing mindless scrolling.

To address this limitation, our team introduced **one additional behavioral task** in which participants were asked to **watch the simulated Reels feed within the prototype while the intervention functionality was active**. This adjustment maintained the original metrics and procedures but allowed for more realistic observation of how users responded to the interventions under conditions resembling typical scrolling behavior. The original quantitative and qualitative measures (task completion time, error rate, and observer notes) remained unchanged, ensuring methodological consistency while strengthening the alignment between test activities and the project's stated usability goals.

Below is an assessment of how each usability goal was addressed within the combined plan:

Usability Goal	Assessment of Coverage in Test Plan
1. Learnability	Effectively addressed. The eight structured tasks examined first-time interactions, supported by measures such as task completion time, error counts, and facilitator assistance. The think-aloud protocol successfully revealed users' evolving mental models.
2. Satisfaction	Well supported. Post-test questionnaires captured user comfort, perceived intrusiveness, and clarity. Observer notes complemented these metrics with qualitative emotional cues, allowing a rounded assessment of satisfaction.
3. Utility	Partially addressed. While post-test questions explored awareness and intrusiveness, no direct behavioral metric existed to measure reduction in mindless scrolling. A longer-term study or objective activity tracking would be needed to evaluate this goal fully.
4. Memorability	Not adequately addressed. The single-session format prevented evaluation of retention or re-learning after nonuse. Multi-session testing with delayed re-exposure would be required to measure this goal.

5. Efficiency	Partially addressed. Timing and error metrics provided general indicators of efficiency, but no baseline comparison existed between normal and intervention-active scrolling. A control condition would improve interpretability.
6. Sustainability	Weakly addressed. The current plan relied on post-test intentions (e.g., likelihood to continue using the app) rather than longitudinal behavioral data. Long-term engagement tracking and interviews would provide more meaningful evidence.
7. Trust and Agency	Strongly addressed. The combination of heuristic evaluation, observer notes, and open-ended interview items effectively captured whether users felt empowered or constrained by the interventions.

Overall, the test plan was **methodologically sound** and **comprehensive in structure**, meeting core usability testing standards. However, several goals — particularly *Utility*, *Memorability*, and *Sustainability* — require longitudinal or comparative measures to yield meaningful insight into behavior change and long-term engagement. The added "fake Reels" task partially filled this gap by contextualizing the interventions within actual scrolling activity, thereby improving the plan's ecological validity without compromising consistency or replicability.

In brief, the revised plan now offers a balanced evaluation framework that preserves the original usability assessment while better addressing the prototype's behavioral intent.

Proposed Modification: Field Study Extension

While the revised plan strengthened ecological validity within a laboratory context, certain behavioral goals remain difficult to measure without longitudinal observation. To address these gaps, a **Field Study** is proposed as a follow-up evaluation phase. This study would begin with a baseline period of participants' normal social media use without FocusGram, followed by a week of real-world use of the prototype. Participants would complete **daily diary entries** and take part in **interviews** at multiple points throughout the week.

This extended study design would provide valuable data, including:

- **Objective behavioral change**, measured through actual reductions in social media use;

- **Sustainability**, validated through retention and continued engagement tracking;

- **Bypass frequency**, showing how often participants circumvent interventions;

- **Memorability**, assessed through continued use or recall after periods of nonuse; and

- **Authentic usage patterns** that reflect natural contexts rather than controlled laboratory settings.

Rationale:
Single-session laboratory testing cannot capture behavioral change, sustainability, or memorability — three of the seven stated usability goals. Conducting a field study in real-world conditions would yield **ecologically valid insights** into the effectiveness of the product at influencing long-term user behavior. When combined with the existing laboratory and simulated tasks, this hybrid evaluation framework would provide both the rigor of controlled usability testing and the depth of real-world behavioral evidence.

In conclusion, the revised test plan successfully enhanced the original evaluation framework by maintaining methodological consistency while adding ecological realism through the behavioral task. The proposed field study further extends this rigor by addressing long-term behavioral and retention goals that cannot be captured in a single lab session. Together, these approaches offer a comprehensive and balanced evaluation strategy that aligns closely with FocusGram's dual emphasis on usability and behavioral impact.

Design Critique

Based on the comprehensive usability evaluation, the following design improvements are proposed to address identified issues and better align with user needs. These recommendations are organized by priority level and correspond directly to problems observed during user testing.

High to Low Priority

1. Implement Core Intervention Functionality

Problem:
 The prototype currently serves only as a UI mockup rather than a functional application. The core intervention mechanisms—**Slow Scroll**, **Monochrome**, and **Screen Timer**—exist only as standalone files and require "Wizard of Oz" testing techniques instead of being integrated into the mobile app codebase. Additionally, the prototype inadequately simulates a social media environment, offering only a static Instagram-like interface with limited scrolling. Several participants noted it "still feels like a demo" or "a prototype rather than a finished app." Although it is indeed a prototype, these comments indicate a perceived disconnect between the simulated experience and genuine doomscrolling behavior.

Recommendations:

- Integrate the intervention effects within an infinite scrolling feed that dynamically repeats posts to better simulate real social media interactions.

2. Fix Slow Scrolling Functionality

Problem:
 The **Slow Scrolling** intervention intermittently blocks or reverses scrolling instead of smoothly reducing its speed.

Recommendations:

- Revise the mechanism to ensure it consistently reduces scroll velocity without blocking input.

- Add a visual indicator to provide immediate feedback when Slow Scrolling is active.

Justification:
 User autonomy is central to the calm-technology philosophy guiding this design. As one evaluator observed, unpredictable scrolling behavior "undermines user control and contradicts the design's calming intent."

3. Implement Gradual Monochrome Transition

Problem:
The current **Monochrome** activation is abrupt and visually jarring, leading to brief disorientation among users.

Recommendations:

- Replace the instant color shift with a gradual transition (3–5 seconds) from full color to grayscale.

- Allow users to configure transition speed in *Settings*.

Justification:
Multiple participants reported being "surprised" or "momentarily disoriented" by the sudden change. A gradual transition helps users to maintain awareness while still supporting the intervention's intended effect.

4. Address Poor Intervention Timing in Demonstrations

Problem:
In the current demo, interventions trigger automatically at 60 seconds, regardless of user activity.

Recommendations:

- Incorporate activity awareness (e.g., delay activation if the user is commenting or messaging).

- Provide user controls to toggle intervention behavior by context (e.g., *Scrolling On/Off*, *Commenting On/Off*, etc.).

Justification:
Even within a prototype, demonstrating thoughtful timing shows users that their experience has been carefully considered. As one evaluator noted, interventions designed to enhance awareness can instead become intrusive if poorly timed. Showing that the system can adapt to context reassures users of its intelligence and sensitivity.

5. Add Visual Intervention Demonstrations

Problem:
The *Controls* page includes only text descriptions of each intervention. One evaluator stated: "A short GIF next to each intervention would explain the functionality far better than text alone."

Recommendations:

- Add simple animated previews (e.g., GIFs or short loops) next to each intervention option on the *Controls* page.

Justification:
Evaluators explicitly requested this feature. Visual demonstrations bridge the gap between abstract text and dynamic functionality, helping users better grasp how interventions behave in real time.

6. Fix Time Limit Slider Confusion

Problem:
The slider for setting daily time limits visually implies continuous input but only accepts 15-minute increments (0, 15, 30, 45, 60, 75, etc.). One evaluator commented: "The bar for setting the daily limit suggests free numeric choice, but it only allows multiples of 15 minutes."

Recommendations:

- Add visible tick marks at each 15-minute interval.

- Display the available values along the slider track.

Justification:
This is a classic case of *false affordance*: the interface suggests flexibility it doesn't actually provide. The resulting mismatch in user expectations can cause frustration and reduce trust. Clear visual cues about constraints ensure transparency and improve user confidence.

Conclusion

In summary, the proposed design improvements aim to enhance both the functional integrity and experiential quality of the prototype by addressing core usability issues identified during evaluation. By integrating intervention mechanisms, refining system feedback, and aligning interface behaviors with principles of calm technology, these recommendations collectively strengthen the system's ability to promote mindful interaction and user autonomy. Implementing these changes would not only improve the fidelity of the prototype but also provide a more valid foundation for future empirical testing and iterative design development.