My Role

- UX Researcher
- UI/UX Designer
- Illustrator

Duration

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Team Member

Taha Zakir

Translation

Hamari Nur is Urdu for Our Light

Process

1. Problem Identification
2. Desk Research
3. User Research
4. Information Synthesis
5. Ideation
6. Prototyping
7. Outcome and Reflections

Illustration of the protagonist of the story, Nur

Problem Identification

Pakistan ranks among the top ten countries most impacted by climate change, with climate disasters affecting 33 million people in 2022 alone, resulting in significant human and economic losses from floods, droughts, and heat waves.

This escalating crisis has heightened anxiety among youth; a recent study showed nearly 70% of 10,000 participants are deeply concerned. Addressing this crisis is imperative to ensure the well-being of Pakistan's citizens, especially the youth, and to pave the way for a sustainable future. Widespread adoption of sustainable behavior can be a key factor in mitigating this crisis.

? Problem: How might we design a solution to encourage sustainable behavior change in Pakistan?

Desk Research

My literature review focused on the perceptions and attitudes of our target audience toward the climate crisis. I also explored the effectiveness of various types of Persuasive Technologies in encouraging sustained behavior change.

Perceptions and Attitudes

1. Emotional Drivers: Negative feelings about climate change motivate action, but sustained change needs positive reinforcement before and after pro-environmental actions.
2. Young Adults' Views: Young adults are more concerned and optimistic about climate action than older adults. Effective engagement means framing the issue as current and relatable, using simplified language.
3. Role of Religion: In Muslim-majority societies, Islam can influence climate perceptions. Many see it as human negligence, divine punishment, or an end-times sign. Using faith can promote environmental actions.

Persuasive Technologies

1. Feedback Types: Users tend to prefer social feedback, which stems from peers, often involving praise, acknowledgment, or peer comparisons over mere factual data regarding their sustainable choices.
2. Narrative-Driven Interfaces: Users react positively to narratives that can teach them about sustainable choices. This highlights the effectiveness of story-driven interfaces in promoting environmental behaviors.
3. Ambient Technologies: Ambient persuasive technologies subtly influence users even when they're cognitively occupied and generally demand fewer cognitive resources.

User Research

- Target Audience: Primarily teenagers and young adults in Pakistan, who will likely face the most significant impacts of the climate crisis in the coming years. I also interviewed some older adults to explore traditional sustainable practices from Pakistan that are fading over time.
- Study Design: We conducted semi-structured interviews with 13 young adults (7M, 6F) and 2 older adults (1 M, 1F). The duration of these interviews ranged from 30 to 50 minutes each. The interview protocol for this study can be accessed here. Interviews were conducted in person, and participants were compensated for their time through snacks (tea and cookies).

Research Questions

1. How do young adults and elders in Pakistan perceive and understand the climate crisis, and how does it personally affect them?
2. How do participants perceive the credibility of different sources of information on the climate crisis, and why do they trust certain sources more than others?
3. What individual and household practices are currently in place to address the crisis, and what motivates or hinders these actions?
4. How do elders define sustainable living, and what traditional practices did they employ that might be reintroduced or adapted?

Data Analysis

We transcribed each interview verbatim and then translated Urdu phrases into English. We made sure that no meaning was lost in translation. Next, we used ATLAS.ti to conduct a thematic analysis of the data.

This involved coding the data to identify significant statements and concepts, grouping the codes into categories, and then synthesizing these categories into overarching themes.

Insights

Perceptions and Understanding of the Climate Crisis:

Participants primarily rely on social media and educational institutions for climate crisis information.	Young adults feel mainstream media often sensationalizes climate news.	Visuals or contextualized statistics on natural disasters drive immediate engagement.	Continuous reminders about the climate crisis are effective in increasing engagement.

There's a risk of desensitization to tragic climate news, causing some to avoid thinking about the crisis altogether.

Easy to forget about the crisis when dealing with their own personal issues.

Many see the crisis's immediate effects but act as if it's a distant concern due to its intangible nature.

Some feel the crisis is too complex to tackle. Crucial to ground the crisis in a relatable context.

Current Practices and Potential Solutions to Address the Climate Crisis:

Individual actions include reducing waste, using public transport, and eating less meat.

Traditional sustainable practices, like using clay pots, are fading due to stigmatization.

Community-level solutions emphasize education and promoting sustainability

Corporate and government inaction frustrates participants, calling for stronger policies

Information Synthesis

I synthesized the insights from our user research to create qualitative personas to stay anchored on user needs.

Persona

Name: Ali

Age: 20 years

Education: Majoring in CS from the University of Punjab

Occupation: Student

Hometown: Lahore, Pakistan

Goal: To adopt a sustainable lifestyle and minimize his carbon footprint.

"I try to remain conscious about how my actions will affect the environment. I know about the climate crisis and its urgency, but it's difficult to keep track of my actions and remind myself to make sustainable choices when I have assignments and exams to worry about."

Story

Ali is a sophomore-year student who is majoring in CS. When confronted with news about the catastrophic consequences of the climate crisis, he was worried about the planet's future. He resolved to live a sustainable lifestyle but found himself making unsustainable choices that were more convenient for him when the initial shock about the climate crisis wore off.

Frustrations

- Feels guilty about not taking action to address the crisis, contributing to his anxiety about the future.
- Trying to form sustainable habits but finds it difficult. Gets distracted by his day-to-day occupations and only remembers about the crisis when confronted with its effects.

Need

Something that helps him develop environmentally friendly habits to adopt a sustainable lifestyle.

Ideation

For effective brainstorming, we tried a twist on the affinity mapping technique. We divided our design goals into sub-problems and then brainstormed solutions for those sub-problems. Our final design was based on the best combination of ideas from those sub-problems: Portability, Continual Reminders, Relatability
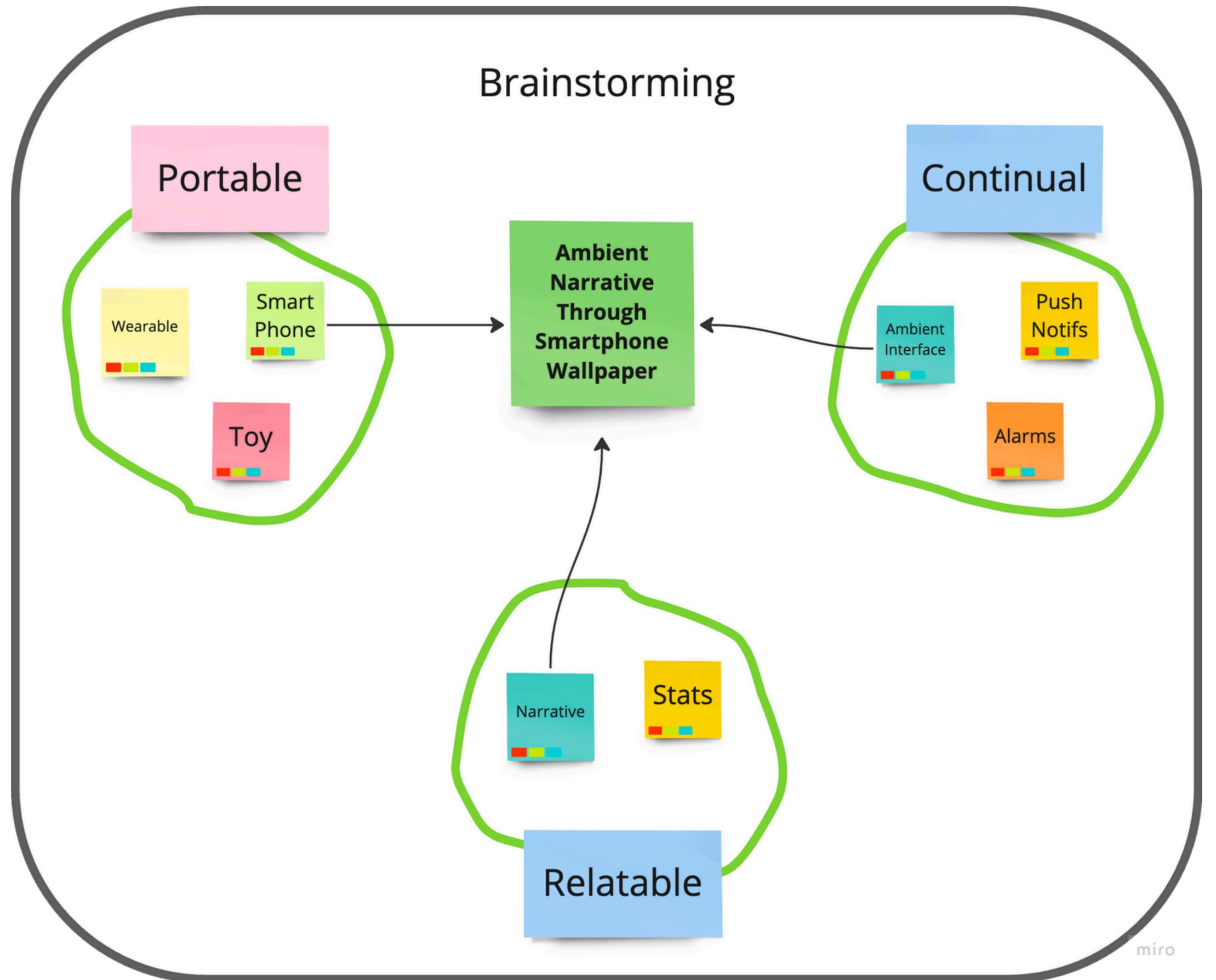
Crafting the Narrative

Our user research shows that visualizations of natural disasters can elicit the strongest emotional response. However, desensitization emerged as a concern, with certain participants becoming indifferent to frequent news of the 2022 flooding in Pakistan.

Thus, our task was to capture attention without inducing emotional fatigue. We chose the mundane village of Lalewala as our setting, reflecting the rustic essence and charm of Pakistan's rural heartland, which we further emphasized using a palette dominated by greens and browns.
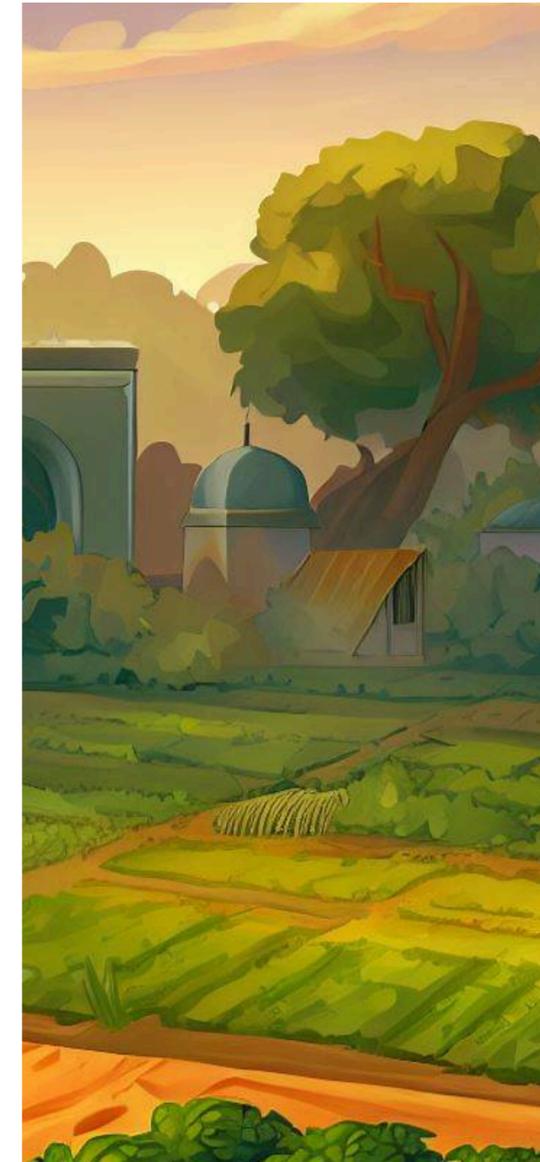
We designed our protagonist, Nur, as a symbol of resilience and hope, exuding warmth and charm. Her tenacity in facing daily challenges and striving for a better life aims to deeply resonate and evoke empathy among our users.

Nur's journey, marked by perseverance and optimism, is designed to inspire and connect, fostering a sense of shared strength and possibility within the audience.
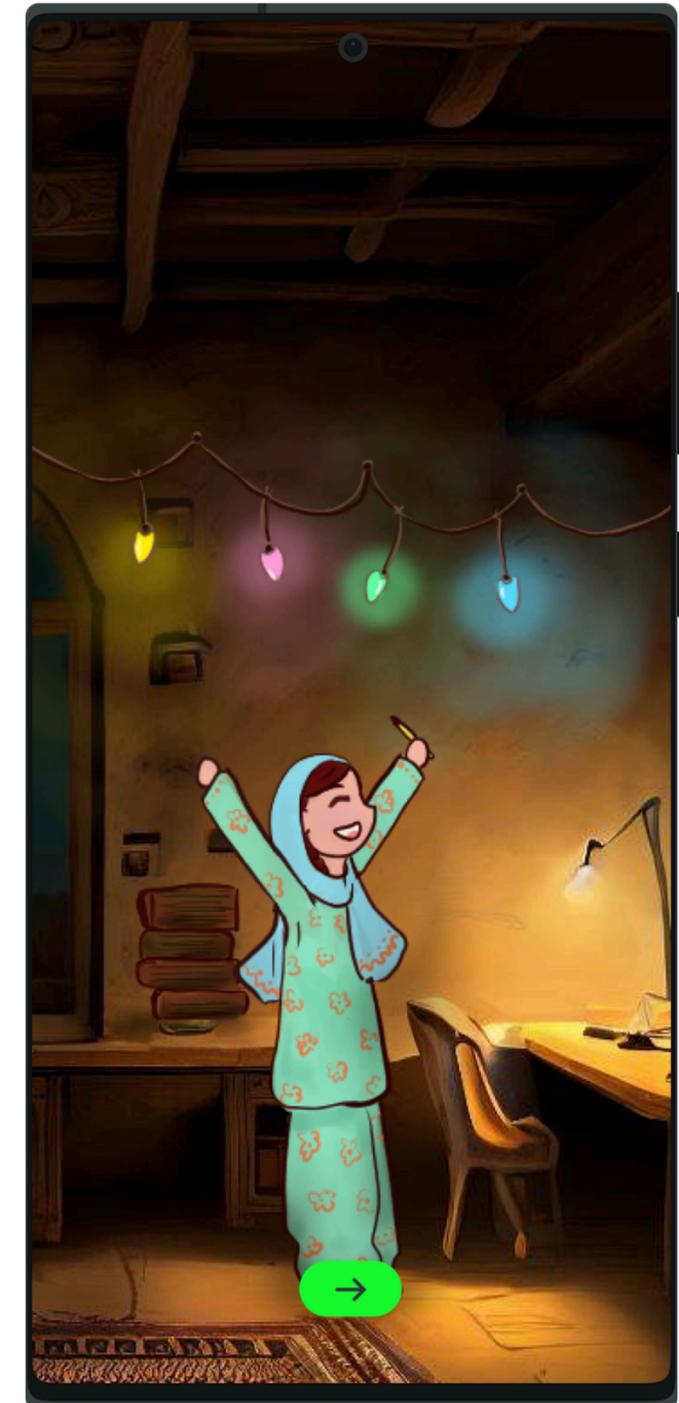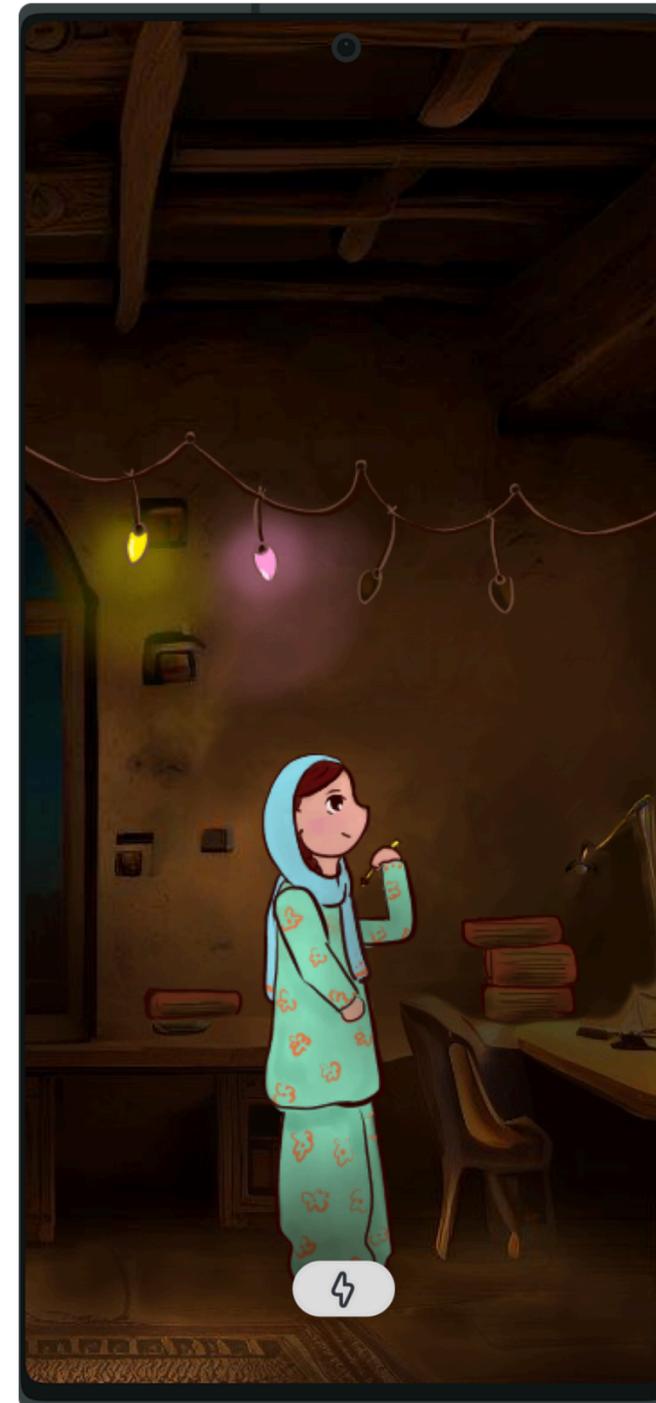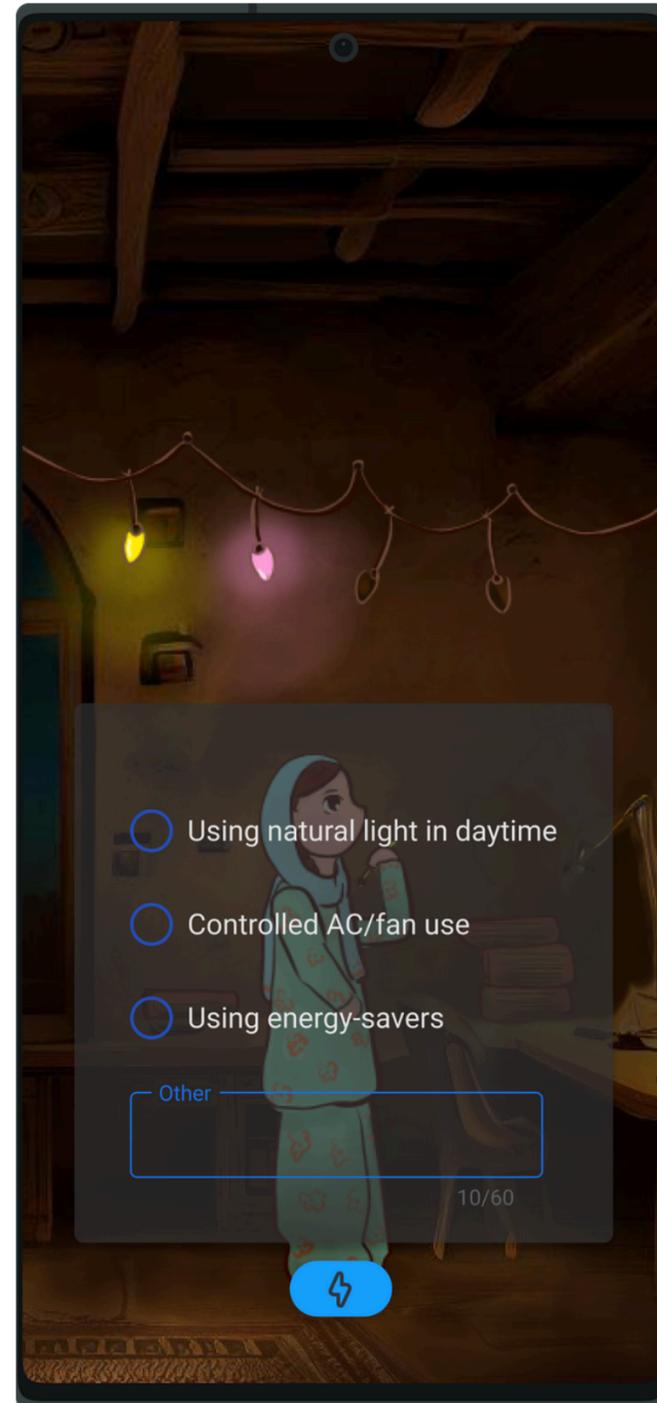
Prototyping

My design leveraged ambient interfaces to consistently remind users about the consequences of the climate crisis through wallpaper-based narratives. Users could progress this narrative by recording their sustainable actions, creating a rewarding experience. This approach gradually turns these actions into habits.
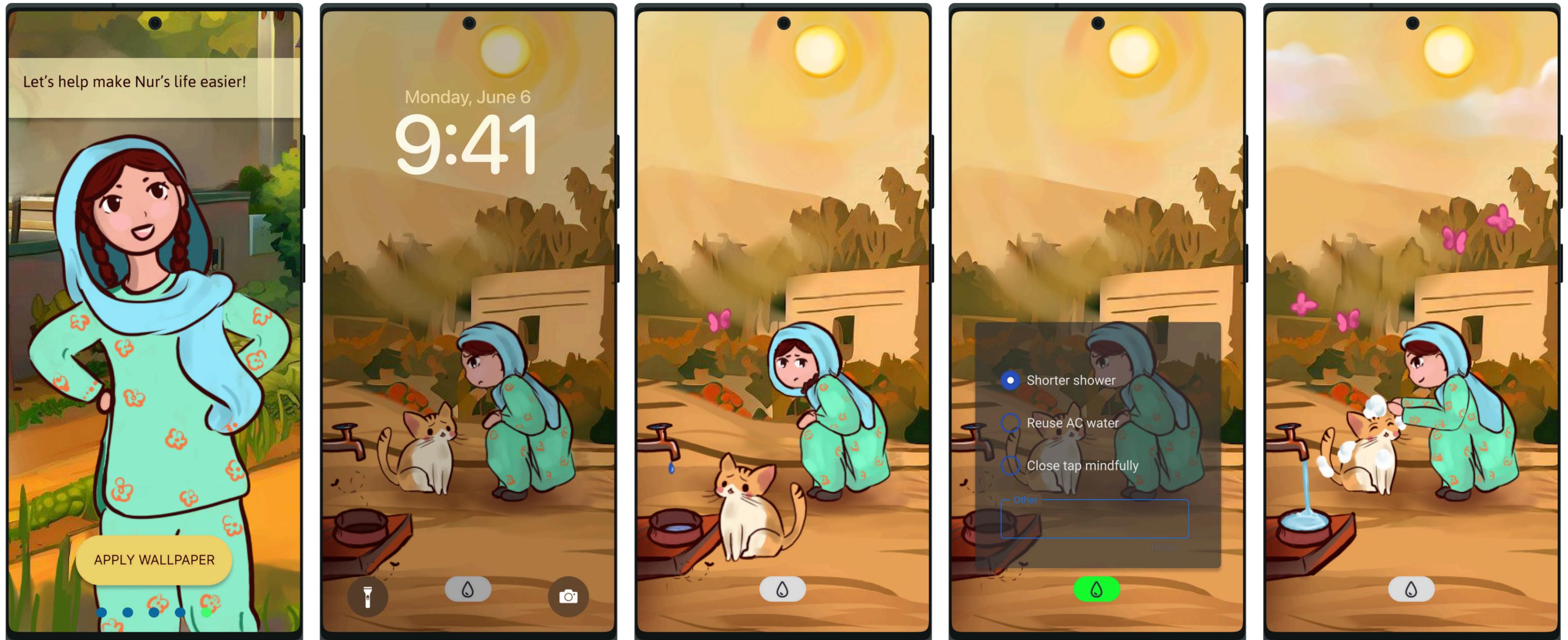
Through multi-chapter storytelling, we walk users through the myriad challenges Nur confronts due to the climate crisis—from drought-induced water shortages to erratic power outages. The variety of challenges would help users realize the ever-reaching effects of the crisis.

Outcome and Reflection

We presented our research and application prototype to a panel of around 20 researchers hailing from different domains. It sparked a discussion around the climate crisis in Pakistan, which enabled us to explore how we could adopt multi-disciplinary approaches to work together and mitigate the impacts of the crisis around us. <u>The presentation can be accessed here</u>.

🔗 The complete prototype can be found on this <u>link</u>.