

Interview Analysis

This interview focused on three core aspects: **perception of breathing, emotional & physiological experiences, and audio-visual associations**. The interview consisted of **nine questions**.

1. Awareness & Changes in Breathing

Do people pay attention to their breathing? Has the pandemic affected this?

- Most participants **do not actively pay attention to their breathing**, except in specific situations (e.g., exercise, stress, meditation, relaxation).
- The pandemic had a **temporary** impact on breathing awareness—some individuals were more conscious of their lung health in the early stages, but it did not develop into a long-term habit.
- Meditation practitioners **consistently** focus on their breathing and emphasize its role in emotional regulation.

Design Insights:

- The goal of the interactive installation should be to **enhance daily awareness of breathing**, rather than relying solely on pandemic-related anxiety as a trigger.
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2. Relationship Between Breathing, Emotions & Physiology (Avoiding Negative Associations)

Emotional Responses to Different Breathing States

- **Rapid breathing:** Participants commonly associate rapid breathing with **anxiety, stress, frustration, or even a sense of suffocation or heightened alertness**.
- **Steady breathing:** Described as **calming, grounding, and providing a sense of security and focus**.

Physical Responses to Different Breathing States

- **Deep breathing:** Expands the chest, relaxes muscles, slows heart rate, and induces a meditative or relaxed state.
- **Shallow breathing:** Increases heart rate, tightens muscles, and contributes to feelings of stress and discomfort.

Design Insights (How to Avoid the Negative Effects of Rapid Breathing in Visuals):

1. **Avoid fast flashing or abrupt jumping animations**, as they may induce anxiety.
 2. **Use smooth, flowing visual forms** to represent the rhythm of breathing, rather than sudden contractions or sharp movements.
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3. Visual Associations with Breathing (Positive Optimization Approach)

- **Water, waves, foam** → Strong sense of flow, lightness, and gradual expansion.
- **Balloon** → Directly represents the expansion and contraction of breathing.
- **Plants** → Symbolic of life, closely linked to the breath cycle.

Color Associations with Emotions

- **Relaxing colors** → **Blue, green, light tones** (e.g., sky, leaves).
- **Anxiety-inducing colors** → **Red, purple, neon shades** (e.g., warning lights, high-contrast colors).

Design Insights:

1. **Use soft, smooth dynamic effects**, such as **wave diffusion**, to simulate a steady breathing rhythm.
 2. **Avoid high-density, erratic particle animations** that may cause discomfort.
 3. **Incorporate the slow rise and fall of a balloon-like motion** to represent the breathing cycle.
 4. **Utilize blue/green tones** to enhance relaxation.
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4. Auditory Associations with Breathing (How Sound Affects Breathing)

- **Low-frequency resonance (e.g., singing bowls)** → Helps induce deep breathing.
- **Natural sounds (wind, rain, flowing water)** → Promotes relaxation and aligns with steady breathing.
- **High-tempo sounds (electronic music, alarms)** → Can accelerate breathing, sometimes causing breath-holding or tension.

Design Insights (How to Use Sound to Guide Steady Breathing):

1. **Combine low-frequency resonance + natural ambient sounds** (wind, water) as background elements to facilitate relaxation.
2. **Avoid high-frequency, fast-paced sound effects** that may induce anxiety.
3. **Utilize breath sounds as feedback** (e.g., subtle wind-like effects or rhythmic breathing sounds) to encourage users to adjust their breathing patterns.