



# Modes

**Visual Music for Anxiety Reduction**

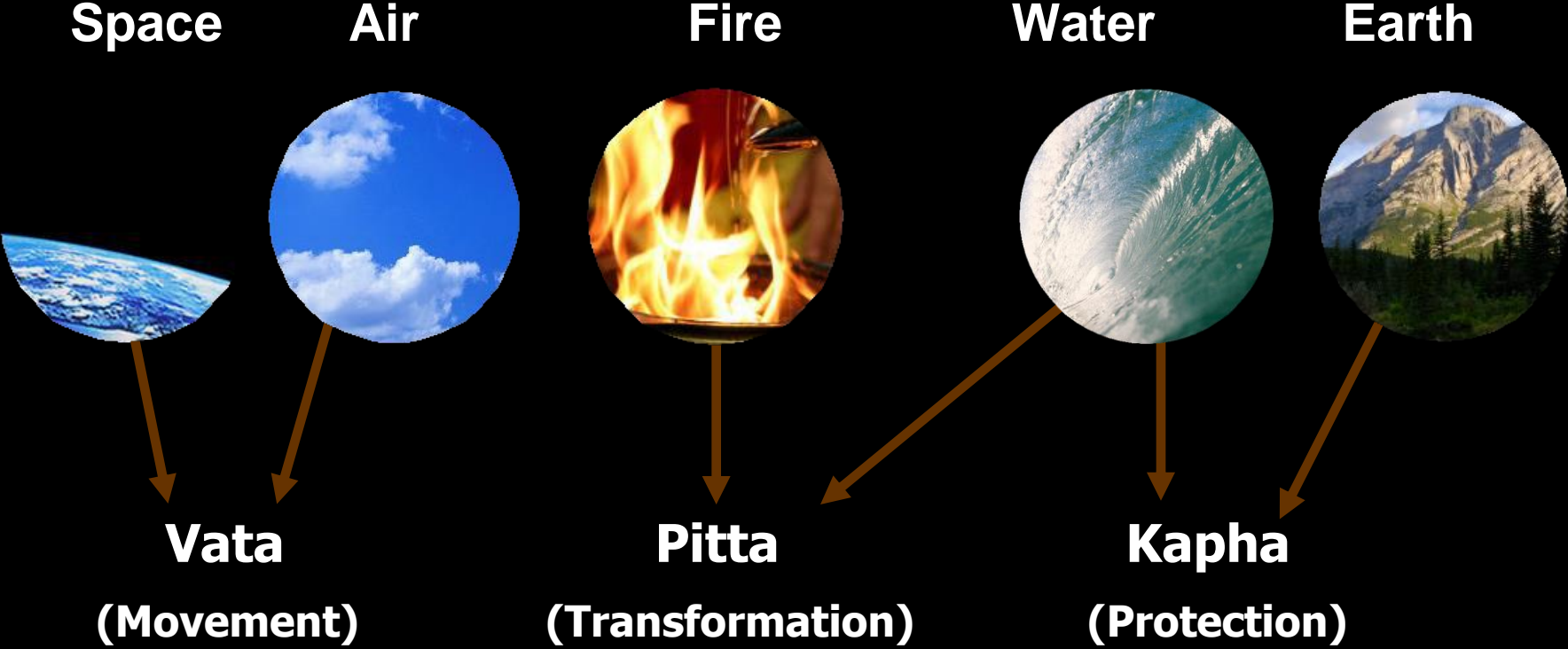
# Five Elements

## Building Blocks of Nature

- **Space (AKASHA) — Potential**
- **Air (VAYU) — Change**
- **Fire (TEJAS) — Transformation**
- **Water (JALA) — Cohesiveness**
- **Earth (PRITHIVI) — Form/Protection**

# Three Doshas

Mind Body Constitutions



# Vata

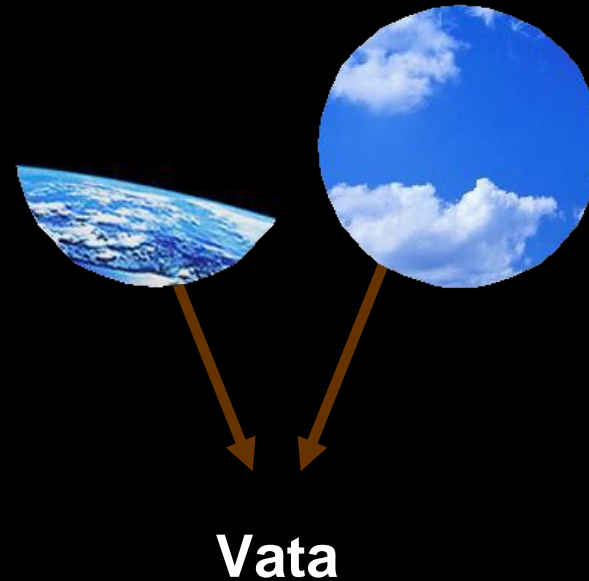
Primary Functions: **Movement, Transportation**

## Qualities of Vata

- Cold
- Light
- Dry
- Irregular
- Rough
- Mobile
- Quick
- Changeable

Space

Air



# Vata

## Resembling the Wind

### Characteristics:

- Thin, light frame
- Variable digestion and sleep patterns
- Dry skin and hair
- Cold hands and feet
- Moves and talks quickly
- Resists routine
- Welcomes new experiences

### When Balanced:

- Energetic
- Creative
- Adaptable
- Shows initiative
- Good communicator
- Spontaneous

### When Imbalanced:

- Overactive Mind
- Anxiety
- Worry
- Inconsistency
- Insomnia
- Constipation
- Gas, bloating

# Pitta

Primary Functions: Transformation, Metabolism

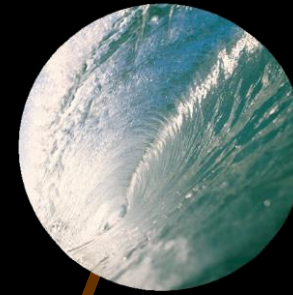
## Qualities of Pitta

- Hot
- Light
- Intense
- Penetrating
- Pungent
- Sharp
- Acidic
- Moist

Fire



Water



Pitta

# Pitta

## Fiery In Nature

### Characteristics

- Medium build
- Strong digestion
- Warm body temp
- Sleeps soundly for short periods
- Sharp intellect
- Direct and precise
- Stays close to routine
- Courageous

### When Balanced

- Bright
- Warm, friendly
- Good decision-maker
- Leader
- Strong digestion

### When Imbalanced

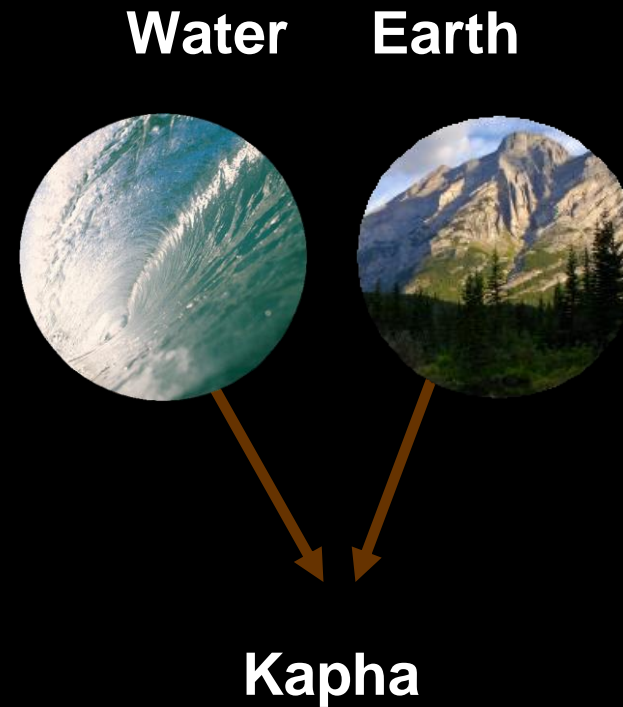
- Angry
- Irritable
- Excessively critical
- Judgmental
- Aggressive
- Skin rashes
- Inflammation
- Indigestion

# Kapha

Primary Functions: **Protection, Structural Integrity**

## Qualities of Kapha

- Cold
- Heavy
- Solid
- Stable
- Smooth
- Slow
- Steady
- Stamina





# Kapha

**Grounded, Unruffled, May Resist Change**

## **Characteristics**

- Heavysset
- Smooth skin and thick hair
- Deep sound sleep
- Slow moving
- Good stamina
- Easygoing
- Methodical, thoughtful nature
- Enjoys routine

## **When Balanced**

- Steady
- Consistent
- Loyal
- Strong
- Supportive
- Content
- Calm

## **When Imbalanced**

- Dull
- Inert
- Needy
- Attached
- Congested
- Overweight
- Complacent
- Overly-protective

# Individual Mind-Body Constitution

## Prakruti

- Your individual constitution - determined at conception
- Made up of all three doshas - but one or two typically predominate

## Vikruti

- Current state of balance - now!
- Influenced by your experiences and choices

**Maintaining balance is essential to health**

ANNEX 2

## Cross-Disciplinary Team



Emily Verba Fischer –  
Visual + Interaction Designer



John Hebbeler –  
Musician + Sound Designer



Meera Rastogi, Ph.D. –  
Psychologist + Art Therapist



Jill Gomez, Ed.D. –  
Mindfulness + Social Work



Hazem Said, Ph.D. –  
Development

## The 3 Modes

**REFOCUS**

**CHILL**

**ENERGIZE**



## The 3 Modes

**REFOCUS** Addresses **Vata** Imbalance

**CHILL** Addresses **Pitta** Imbalance

**ENERGIZE** Addresses **Kapha** Imbalance



# Sound Design Methodology

## Sound Design Methodology

### **PART 1\_ Music composition**

- *Lower consistent volume*
- *Consistent placement*
- *Drives the environment*

### **PART 2\_ Interactive frequency**

- *Variable volume levels and placement*
- *Grows the environment*



## Music Composition

**TIMBRE** — *The quality given to sound*

**MELODY** — *An agreeable arrangement of sounds*

**RHYTHM** — *A regular, repeated pattern of movement or sound*

## **Interactive Frequency**

- *6 second tones with unique textures used in a binaural setting*
- *A psychoacoustics processor creates a 360 degree listening space*
- *All tones are in the same key as the composition filling different spatial positions*

## **Refocus Mode**

- *Light but steady*
- *Soft guitar*
- *Midrange textures driving the music*
- *High tones*
- *Low frequencies*
- *Bass and synths*

## Chill Mode

- *Warming, walking, composition*
- *Low bass music and overtones driving music*
- *Midrange tones*
- *Frequencies: piano and variations of piano, synth*

## **Energize Mode**

- *Upbeat, moving composition*
- *Fender rhodes driving and piano notes driving music*
- *Tones: strings, hard piano, strong synth sounds*

## **Sound Design Methodology Conclusion**

**Effectiveness is determined by the overall sound and musical properties that have been specifically written and recorded to either Refocus, Chill, or Energize a user. Each sound environment elicits a different “feel” unique to the environment’s characteristics — and, in combination with the visual and interaction design elements, allows bachelor student users to Refocus, Chill, or Energize.**

# Visual Design Methodology

# Visual Design Methodology

**PART 1\_ Color**

**PART 2\_ Circle**

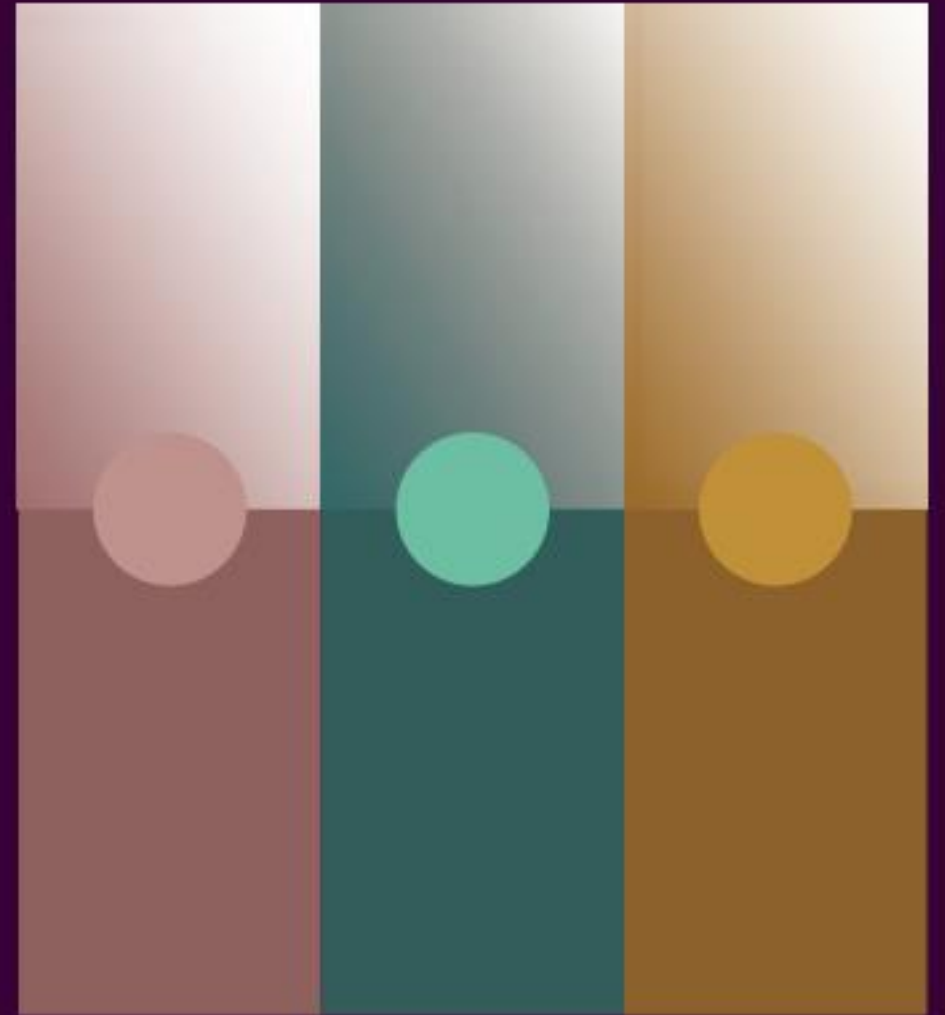


## Color psychology guides the user towards anxiety reduction.

- HUE** — *“A property of color that represents the generic names of family groups within the visible spectrum”* (Puhalla, 2011)
- SATURATION** — *“Brightness or intensity”* (Albers, 1969)
- VALUE** — *“A color’s lightness or darkness”* (Puhalla, 2011)

## Refocus Mode

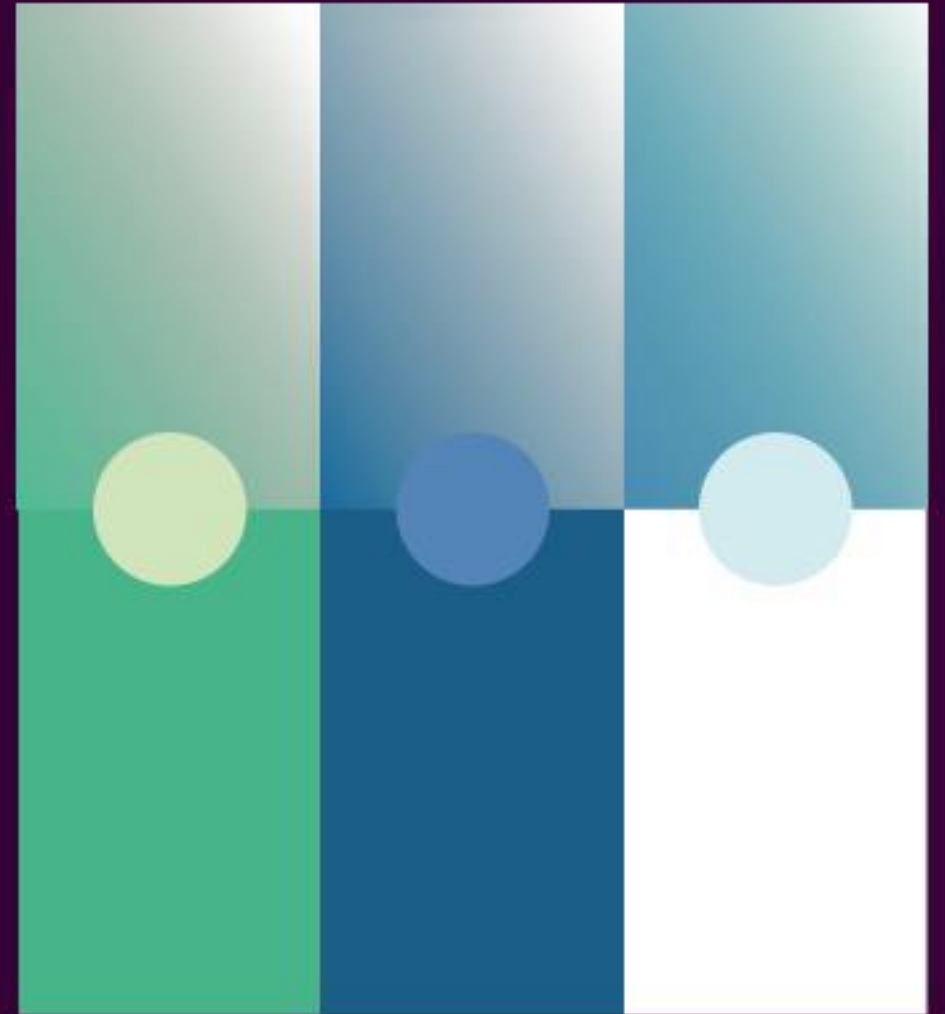
- *Intention: to move from scatter-brained state to grounded, clear-headed state*
- *Grounding, warm earth tones (hue)*
- *Mid level saturation*
- *Dark, heavy values*



Addresses **Vata** Imbalance

## Chill Mode

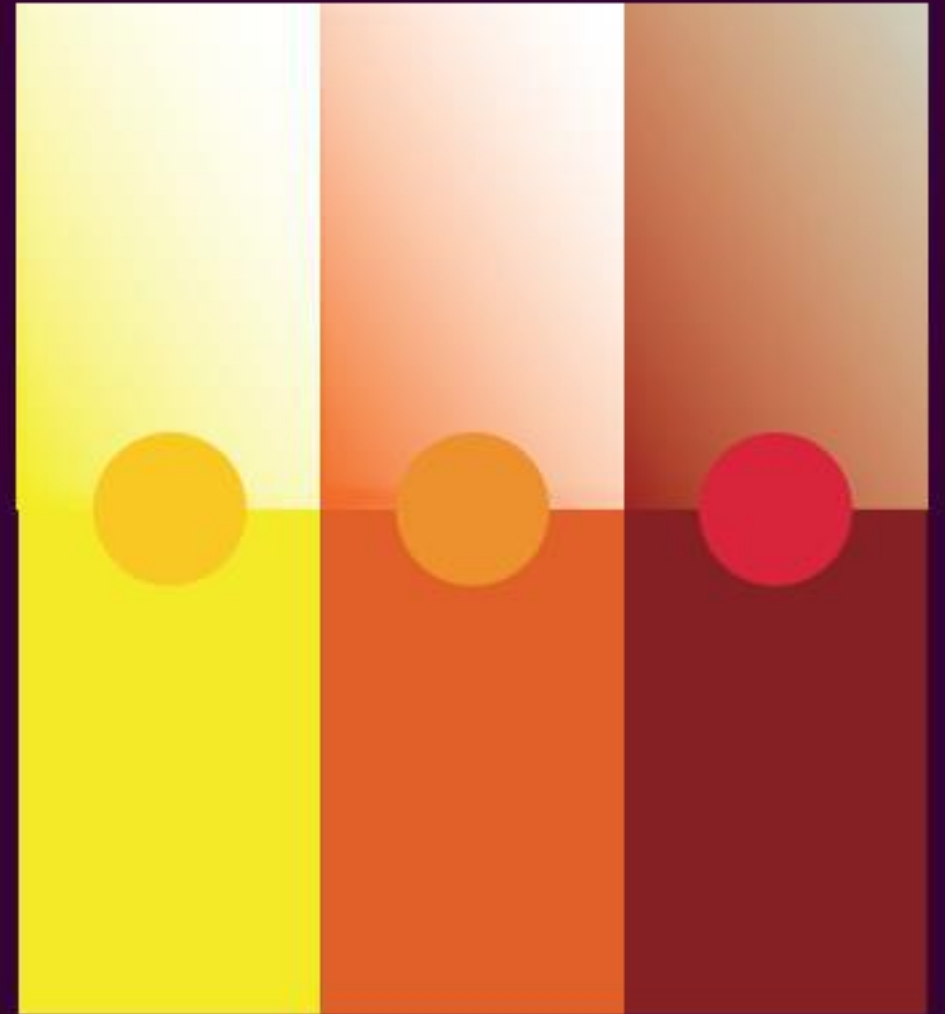
- *Intention: to move from fiery, angry state into cool, collected state*
- *Cooling, oceanic colors (hue)*
- *Medium saturation*
- *Range of values*



Addresses **Pitta** Imbalance

## Energize Mode

- *Intention: to move from inert, sluggish state to lively, rejuvenated state*
- *Fiery, warm hues*
- *Bold saturation*
- *Mid-to-dark values*



Addresses **Kapha** Imbalance

**“The circle is the first,  
perfect shape... The space  
speaks of potential —  
the tension between what  
is achieved and what could  
be achieved.”**


(Gestalten, 2008)

Circle behaviors are linked to 6 available GESTURES:

**1.TAP — 2.SWIPE — 3.PINCH — 4.REVERSE  
PINCH — 5.DRAW — 6.PRESS and HOLD**

## Gestures

**1.TAP — 2.SWIPE — 3.PINCH — 4.REVERSE  
PINCH — 5.DRAW — 6.PRESS and HOLD**



**MUSIC:** Trigger background track and tone per gesture

**VISUALS:** Trigger circle behaviors and color considerations

## Demo Video

*Various combinations of:*

*Tapping*

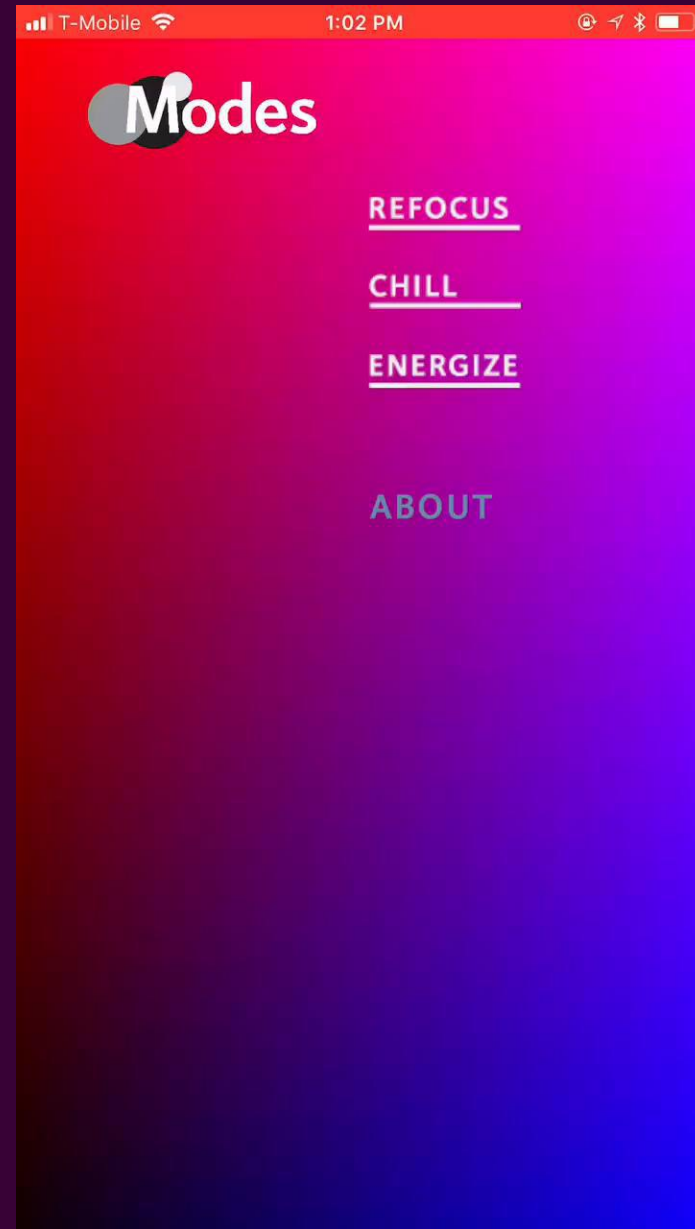
*Swiping*

*Pinching*

*Reverse Pinching*

*Drawing*

*Pressing and Holding*





## Research Methods: Pilot Study Measurements

- *1\_ The reduction of self-reported anxiety in bachelor students*
- *2\_ The reduction of bachelor student heart rates*

**12 participants — Average age: 23.6 — Average year in school: 1.4**  
**Race / ethnicity: 11 Caucasian and 1 Mixed**

**Time 1**



Consent form  
Demographic questionnaire  
State Trait Anxiety Inventory  
Baseline heart rate (HR)



**5 minutes**



Interaction with Modes  
Continued recording of HR



**Time 2**



State Trait Anxiety Inventory  
Baseline heart rate

## Findings

Pre-Modes anxiety score average: **91.75**

Post-anxiety score average: **80.17**

Average change from pre to post: **13 points**

**84%** of people had a decrease in anxiety

*“It did get my leg to stop shaking which is more of an unintentional thing.”*

*“I don’t feel as anxious.”*

*“I thought the app was fun. It held my attention the entire time which is hard to accomplish.”*

## **Conclusion**

**The attention to visual, interaction and sound design harmony within the Modes digital tool ultimately correlates to the inner harmony experienced within the user when anxiety is reduced.**

**THANK YOU**

**Available on the app store (for iPhone only so far)**

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