

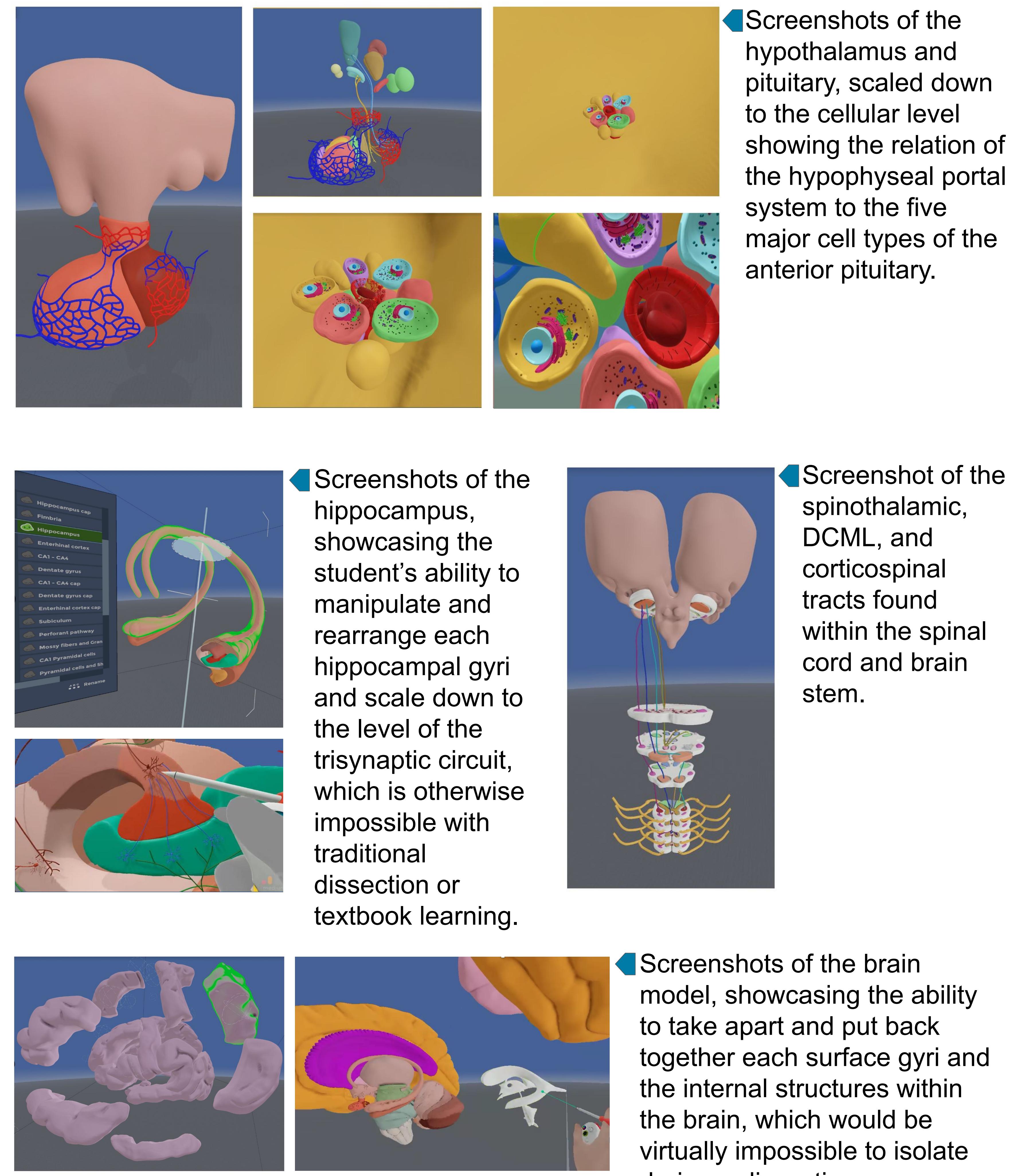
The Use of Virtual Reality in Medical Education

Jerry Jose, Mohit Gogna, Edward Piscitelli, Randy F. Stout, PhD

Neuro360 VR

Jerry Jose, Maddison Messmer, Chloe Bodden, Nicolas Frangella, Salonie Dave, Dr. Randy Stout

- Purpose:** Medical students, after taking neuroanatomy, created anatomically accurate digital models (using Adobe Medium) of the human brain to enhance learning for future medical students through Virtual Reality (VR).
- Benefits of VR:**
 - Students are able to customize and personalize their learning
 - Self-paced and self directed, allowing for learning through trial and error
 - Ability to scale and rearrange both macroscopic and microscopic structures all within the same model

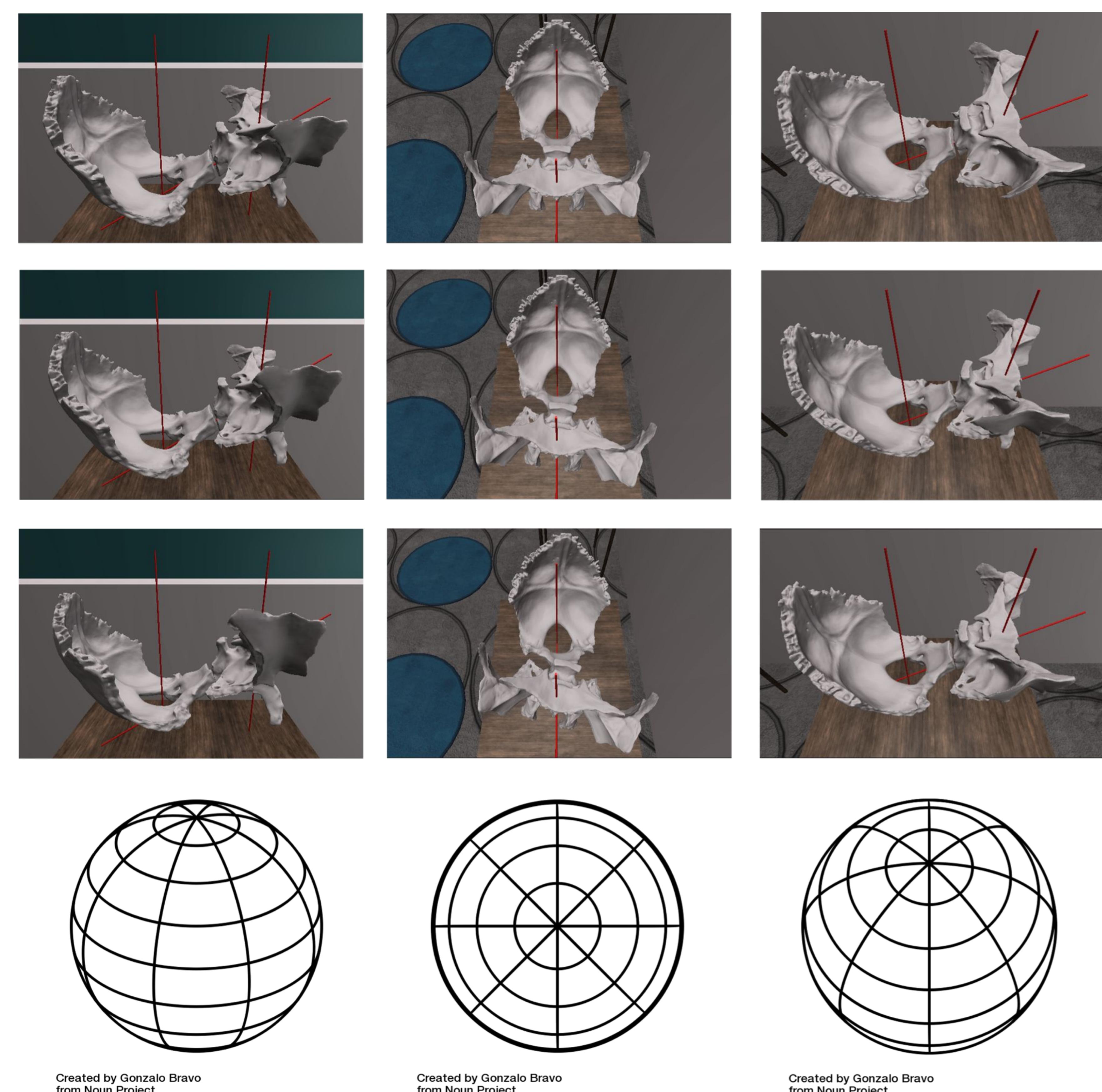


Teaching Cranial Strain Patterns Using Virtual Reality

Purpose: To build an entirely virtual learning environment used to teach medical students cranial bone strain patterns

Overview:

- We built the first ever interactive OMM VR Module for cranial bone instruction. We included animations of cranial bone movements that are exaggerated to aid student understanding as well as 3D illustrations of the axes of rotation for the movements.
- The resulting interactive and personalized VR instruction platform allows students to focus on the particular motion patterns that they have difficulty understanding based on standard instruction methods.



Osteopathic Manipulative Medicine VR

Edward Piscitelli, Erum Ahmed, Dr. Sheldon Yao, Dr. Randy Stout

- Purpose:** Pilot Study to assess the use of Virtual Reality in teaching OMM Concepts
- Overview:** 40+ question assessment based on “Look, Feel, Move”:
 - Body Landmarks & Symmetry
 - Plumb Line
 - Red Reflex & Skin Drag Techniques
 - Active Range of Motion Testing
- Participants:** 45 1st year medical students at NYITCOM
- Data Collection:** Assessment Score, Play Time, Redcap Survey
- Conclusion:** 89.7% (40) participants found OMM VR a positive experience. Future iterations will be designed to incorporate treatment techniques like Muscle Energy or Counterstrain.

