

Impact of an Immersive, Virtual Reality (VR) Experience on Healthcare Provider Burnout and Stress



Jennifer Hayakawa, DNP, CNS, CNRN, CCRN-K; Susan See, MSN, RN, CPHON; John Schomberg, PhD, MPH

BACKGROUND

- Stress and anxiety are experienced by healthcare professionals as a consequence of caregiving.
- >50% of physicians and >40% of nurses report symptoms of compassion fatigue and burnout¹.
- Healthcare workers in pediatrics, oncology, ED, and critical care units are at increased risk²⁻⁶.
- Music therapy reduces stress and anxiety⁷.
- Specifically, there is empirical evidence that classical music has a physiological impact on the brain and can enhance emotion and mood and may reduce stress and anxiety⁸⁻¹⁰.
- Recent advances in virtual reality (VR) technology offer a compelling opportunity to provide immersive experiences that "transport" users to novel environments.
- Maestro Games' The Last Maestro™ is a VR-based immersive experience that creates a safe space to heal through the power of classical music.

PURPOSE

The purpose of this study was to evaluate the utility of The Last Maestro™ classical music experience as a strategy for reducing healthcare worker burnout and anxiety at CHOC Children's.

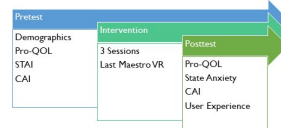
METHODS

Specific Aims

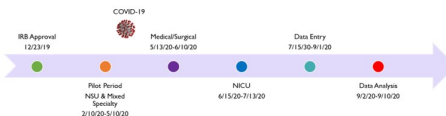
- Evaluate whether The Last Maestro™ is effective as:
 - Enhancing professional quality of life (Pro-QOL)
 - Reducing stress and anxiety (STAI)
 - Enhancing capacity for developing caring relationships with patients and families (CAI)

Examine user experience/satisfaction and willingness to use/recommend for use

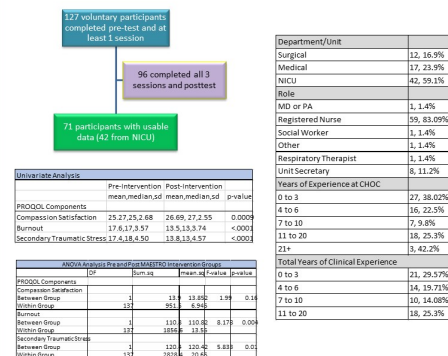
- Pretest/posttest design to measure the impact of intervention using valid and reliable self-reported tools: Professional Quality of Life (Pro-QOL), State Trait Anxiety Inventory (STAI), and Caring Ability Inventory (CAI).



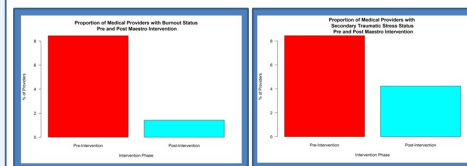
- Began as a 5-week study with associates and providers on Neuroscience Unit (NSU) and Multispecialty Unit (MSU).
- Due to COVID, expanded (over 7 months) in phases to include: Medical, Surgical, and Neonatal Intensive Care Unit (NICU).



RESULTS



- There was a statistically significant decrease in self-reported burnout (<0.0001) and secondary traumatic stress (<0.0001).



- 87% of participants stated that they recommended this intervention for other staff.

CONCLUSIONS

- Burnout has become a significant problem within caregiving professions, translating into an unwillingness or inability to develop caring relationships with patients and leading to poorer-quality patient care⁵.
- COVID-19 has highlighted the importance of mental resilience and wellness during a period of anxiety and fear. We recognize the need to explore and advance effective modalities of mental health care for our healthcare workers.
- This study provides evidence that Last Maestro™ may be a useful tool to reduce burnout and post-traumatic stress.
- Future studies are needed to evaluate the impact of this intervention on healthcare professionals with high levels of burnout and stress as well as its utility in patients and families.

REFERENCES

- See attached reference list.

ACKNOWLEDGMENTS

- Walden W. and Jean Young Shaw Foundation
- West Coast University
- Maestro Games, SPC



Nursing Research and Innovation

Children's Hospital of Orange County, CA
Presented in 2021