

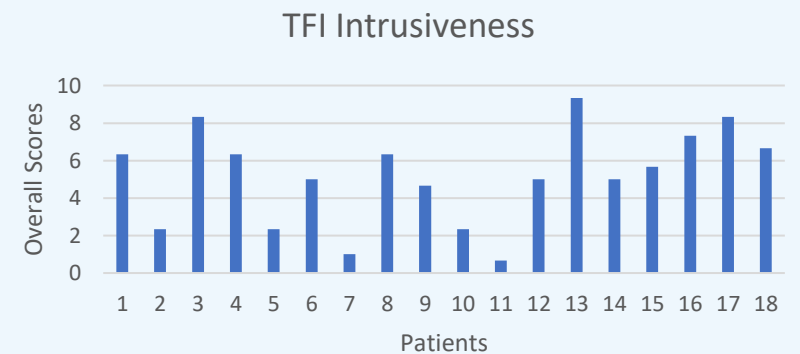
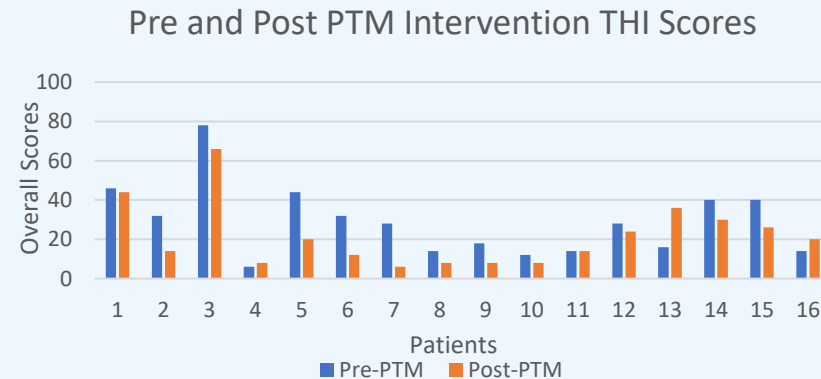
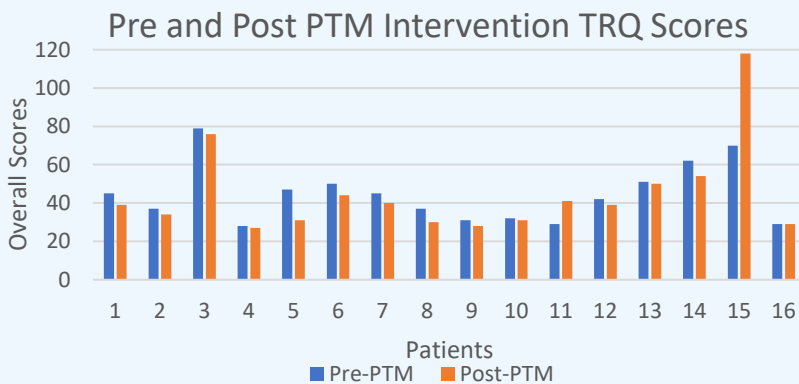
Effectiveness of Virtual PTM Intervention in Veterans and Active-Duty Military Members

A.Mullis, B.A. & M. Woffard, B.S. (Doctor of Audiology Students, Auburn University)

Mentors: S. Krishnamurti, Ph.D., L. Wise, Au.D., (Audiology) L. McMillan, Ph.D. (School of Nursing), & J. Sefton, Ph.D. (Kinesiology)
Auburn University

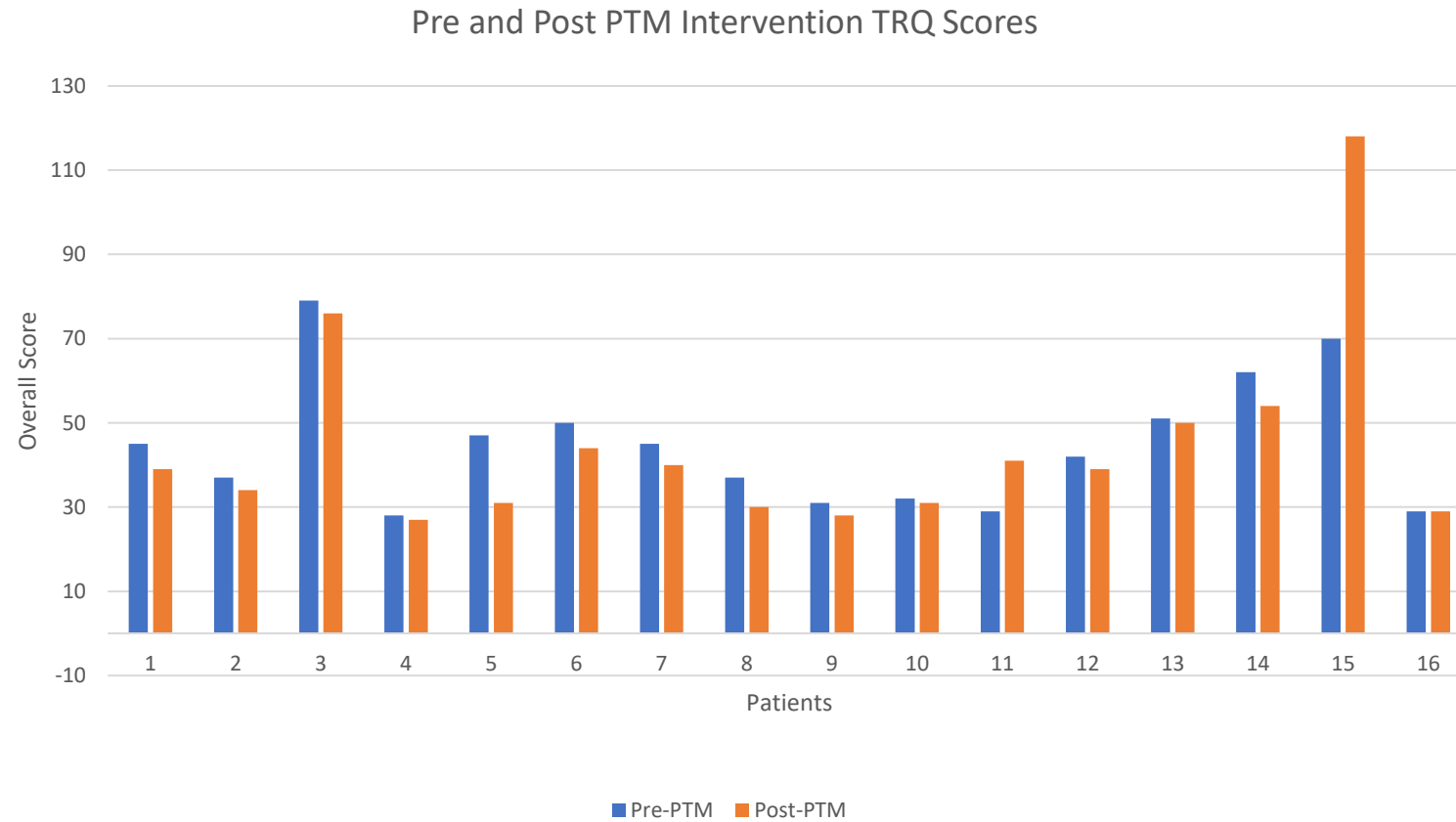
Introduction

- Tinnitus is described as the feeling of constant ringing, roaring, or hissing sound with varying degrees of loudness “coming from the ear”. (Henry et al. 2019)
- Bothersome tinnitus can be reported by 20% of all patients who report having tinnitus.
 - According to Moore et al. 2019, the incidence rate of tinnitus in active duty military members rose from 1.84 per 1000 members in 2001 to 6.33 in 2015
 - 17.1% of U.S. Army Soldiers reported bothersome tinnitus which is significantly higher in comparison to the general population which 6.6% reported bothersome tinnitus (Sherlock et al. 2023)
- Tinnitus is characterized by the patient’s perception (auditory percepts of pitch, loudness, and spectrum) while tinnitus reaction refers to the bothersome nature of tinnitus (Manning et al. 2018)
- Progressive Tinnitus Management is an established program offering a quality treatment plan to many suffering from tinnitus. This study sought to expand this treatment option via a virtual delivery method

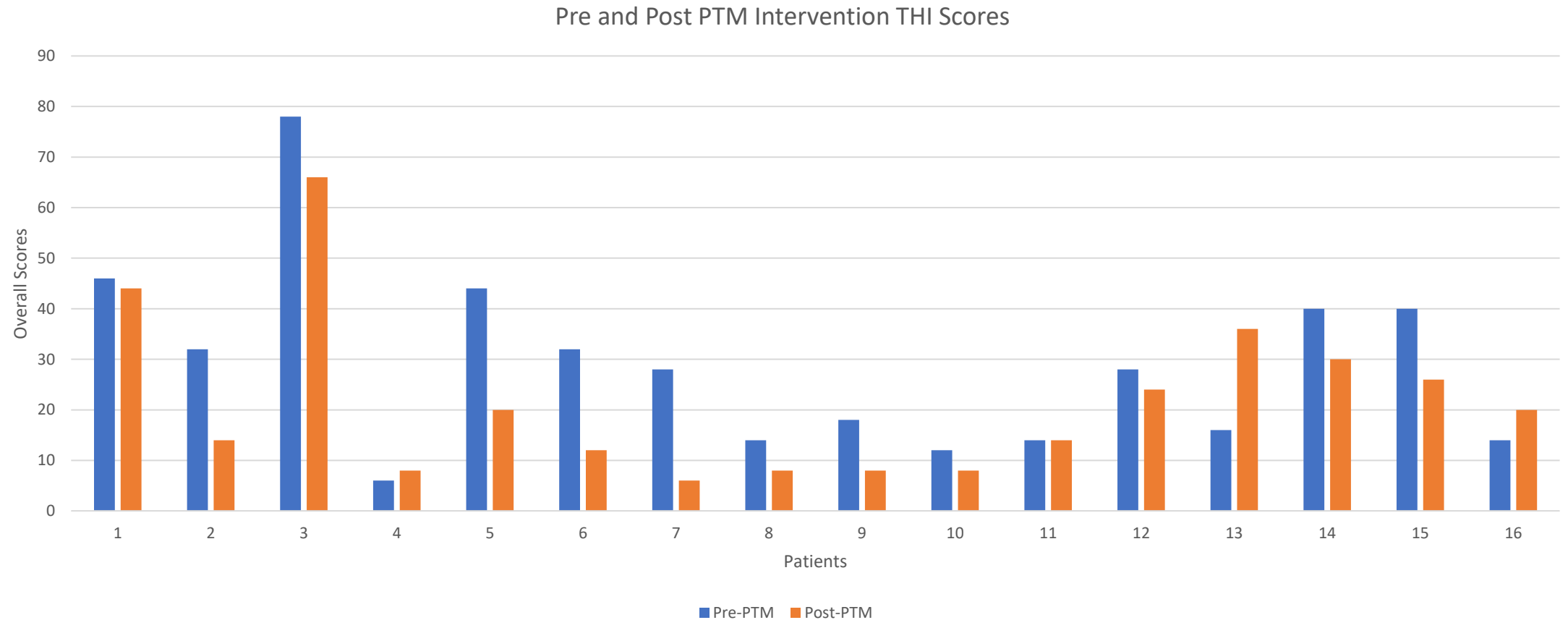


- Intervention outcomes of PTM can significantly impact underlying mechanisms proposed for the generation of tinnitus.
- Henry et al. suggested that at least three underlying mechanisms are involved in the perception of tinnitus: 1. Altered gain by the CAS, 2. Spontaneous neural activity, and 3. Hyperactivity of neurons. Sound therapy introduced as part of PTM has the potential to reduce the impact of these mechanisms.
- Husain et al. studied neural and behavioral measures of tinnitus handicap in military and civilian individuals. For those with bothersome tinnitus, neural correlates found were: 1. Increased activity in the prefrontal cortex, 2. Decreased activity in the left primary cortex, and 3. decreased activity in the cingulate cortex. The introduction of PTM can alter the physiological activity in these areas and reduce the risk of abnormal plasticity.

Individual participant's performance on TRQ



Individual participant's performance on THI



Individual participant's performance on TFI-Intrusiveness subscale

