

well-controlled prospective randomized double-blind studies, with different dosages of S/V, using valsartan as comparison condition, particularly in patients with high anxiety scores. Such studies should also be performed in patients with primary anxiety disorders. Because neprilysin is a “promiscuous enzyme” with a large variety of potential substrates (Singh et al. 2017), underlying anxiety modulating mechanisms of neprilysin inhibition via behaviorally active peptides beyond ANP (such as enkephalin, substance P, adrenomedullin, neuropeptide Y, etc.) need future research. Neprilysin inhibition remains an interesting target for potential anxiety modulation in man.

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## EFFICACY OF TRANSCUTANEOUS AURICULAR VAGAL NERVE STIMULATION AND JACOBSON RELAXATION TECHNIQUE ON STRESS MANAGEMENT AMONG HEALTH SCIENCE CRRI POPULATION

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Dear Editor,

We would like to share our experience with the Psychiatric Danubina audience that stress is a major mental health issue. The word ‘stress’ is the consequence of an individual’s physical, mental and emotional strain (Salam et al. 2013). In this modern world, people are under a lot of pressure, but workplace stress has taken on a special significance (Franza et al. 2015). Stress in the workplace results in physical and psychological reactions that increase the chance of adverse health effects (Öğütü et al. 2021).

Emotional and physical wellbeing are closely linked to the ability to work efficiently (Franza F et al. 2015). Stress is more common in health profession than in other field (Grace & VanHeuvelen 2019). Healthcare professionals work involves them interacting with their emotional feelings of sufferings, empathy and exhaustion (Franza et al. 2015). It is unknown to health science students that how stress can cause illness, health changes, unsatisfactory in the patient care and inattention (Periasamy et al. 2023).

Studies has shown that non-invasive transcutaneous vagal nerve stimulation (TaVNS) (Wu et al. 2022) and Jacobson

relaxation technique (Akbari et al. 2020) plays a major role in managing stress. Here, we have presented a case diagnosed with stress who had positive effect in stress after the TaVNS and Jacobson relaxation technique follow up. The study was approved by ethical committee of the institution on human subjects (01/021/2023/ISRB/PGSR/SCPT) and Helsinki declaration of 1995 (revised in Edinburgh 2000). The study procedure was explained and subject was willing for the treatment. Informed consent was obtained and subject's anonymity was preserved. A twenty-four years old male pursuing his internship at a tertiary hospital was diagnosed with stress after screening with perceived stress scale. He complaints of feeling isolated and anxious throughout the day. This phase continued for past 2 month along with his family financial situation and reported that he faced many rejections in his life, which made his mental status unstable. He was not into any psychiatric related drugs and there is no family history of psychiatric disease.

Then we collected a brief history of his mental status in which he reported that he was on the cutting edge of his life and exhausted due to his family issues. This event made his confident level to go down, performance in the patient care got disturbed, lack in decision making, his eating habits changed a lot, addicted to the caffeine more than 8 times/ day, agitated and irritated for absurd things, always worried about something and his sleep pattern has changed to sleep fragmenting. He developed a habit of nail biting and lost interest in self-grooming. He talks about how it is hard to strike a work and personal life balance. As it progresses, he notices a period of self-doubt and continuously criticizing his own talents.

We have assessed him with perceived stress scale which is a classical scale for assessing the stress in which he has a

score of 29/40 which would be considered as high perceived stress. Following the assessment, TaVNS and Jacobson relaxation technique was recommended as treatment. TaVNS is administered via clip electrode over cymba concha in the left ear with a frequency of 25 Hz, pulse width 200  $\mu$ s and amplitude of 1.5milliamperes for a duration of 15 minutes of 4 days each week for one month along with Jacobson relaxation technique for a period of 15 minutes of four days each week for one month. For Jacobson relaxation technique, subject was instructed to close their eyes and sit in a comfortable position. Tighten and hold the muscle for five slow counts during workout cycle. Then, release the muscle totally and swiftly for ten seconds. After every step, calm yourself by taking three deep breaths, in through your nose and out through your mouth. After 4 weeks of intervention, there is a subsequent decrease in the perceived stress scale score to 15/40 which would be considered as moderate stress. This case study shows that after intervention, subject undergoes a profound change in several aspects of his life. He experiences an emotional shift in which he finds himself to be stronger and experiences a significant reduction in frequent episodes of worry.

He professionally achieved better work output, greater job satisfaction and became flexible to solve problems. He learns adaptable coping mechanisms to handle stressful situations without losing control. Physically, sleep habits, energy, and overall physical well-being has improved. And now he is managing his healthier work-life balance. In the end, TaVNS and Jacobson relaxation technique has a positive impact in stress management among health science population. I think that this study will add a lot of knowledge on vagal nerve stimulation and Jacobson relaxation as a treatment for stress among health science population.

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