Cranial Electrotherapy: Treating Posttraumatic Stress Disorder

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Methodology: Symptom and Diagnosis

Early CES research tended to measure the effects of CES on a particular symptom outcome (such as depression) with a variety of diagnoses.18,19,20 Previous meta-analyses have followed the same pattern.21 By considering both the specific diagnosis (population criteria) and the symptom (outcome criteria) in the grouping of studies, this project demonstrates the efficacy of CES more clearly and conclusively.

Deliverables

In order to share the conclusions of the research with patients and practitioners, a website was created.

Accessible and Understandable

- The information on the webpage is presented at a 5th grade reading level, so it can be understood in 5 minutes.

Implications are Clear
- The chart (shown below) clarifies the conclusions and implications of the research at a glance.

Facilitates Evidence-Based Practice
- By providing links to original studies, the site facilitates provider research review.

Limitations of the Literature

- No studies utilize patients with PTSD.22
- Study parameters are inconsistent.24
- Most studies have neglected measuring adverse events.22
- Many studies had quality problems.22,23
- The bleeding procedures have never been validated.22,24
- Much of the literature is outdated.2,3,4,7,9,10

Research Recommendations

- Specify diagnostic criteria.24
- Carefully consider study parameters.24
- Avoid bias using GRADE criteria.22
- Use validated instruments for adverse effects.22
- Validate the bleeding procedure.22,24

THEORETICAL FRAMEWORK

The context of Bandura’s social cognitive theory sheds light on how CES may support recovery from PTSD. CES may support the individual’s ability to cognitively process trauma without becoming psychologically or physiologically overwhelmed by the fear response. The availability of a non-pharmacological treatment option that aligns with patient values also contributes to the individual’s sense of empowerment. Both of these mechanisms support the brain in recovering from PTSD.

CONCLUSIONS

CES holds promise as a treatment option for PTSD. Further research on the effects of CES on individuals with PTSD should focus on a subgroup of patients whose most prevalent symptoms of PTSD are anxiety related.

REFERENCES


LITERATURE REVIEW

CES is effective in treating anxiety symptoms in populations with anxiety disorders.1,2,3,4
• Anxiety Symptoms/ Anxiety Disorders1,2,3,4
- CES also holds promise for treating the following combination of symptom/ population, but more research is needed.
- Depression/ Bipolar II1
- Anxiety, Depression, and Sobriety/Substance Use Disorders1,2,3,4
- Pain/ Chronic Headaches,1,2,3,4,5
- Pain/ Fibromyalgia1,5,6

Symptom Diagnosis Effective #Study #Participant Results Reliability
Depression Unipolar Depression No 2 50 Not effective Consistent
Depression Bipolar II Maybe 1 16 Effective Small, high quality
Depression Mixed Psychiatric No 3 105 Mixed Outdated studies
Depression Healthy Adults No 4 293 Mixed High quality studies
Anxiety Anxiety disorder Yes 4 220 Effective High quality
Anxiety Mixed Psychiatric No 3 105 Not effective Outdated studies
Anxiety Healthy Adults No 3 253 Mixed Inconsistent designs
Anxiety Substance Use Maybe 5 266 Effective Consistent designs
Depression Substance Use Maybe 3 161 Effective Outdated studies
Sobriety Substance Use Unknown 1 28 Effective One outdated study
Insomnia Primary Insomnia No 3 84 Not effective Inconsistent results
Insomnia Secondary Insomnia No 3 101 Mixed Inconsistent design
Chronic Pain Headache Maybe 4 234 Effective Inconsistent designs
Chronic Pain Fibromyalgia Maybe 3 191 Effective Low quality, consistent
Chronic Pain Neuro-Musc-Skeletal No 2 30 Not effective Consistent
Chronic Pain Spinal Injury Unknown 3 173 Effective Low quality, inconsistent
Chronic Pain Back Pain Unknown 2 95 Mixed Low quality, inconsistent
Chronic Pain Joint Pain Unknown 2 94 Effective Low quality, inconsistent