Neurofeedback Training for Stress and Burnout in the Workplace: A Double Blind Study

Presented by Nikki Sopchak, MPA
Introduction & Contact

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The Problem: Stress

National average PSS–10 – Cohen’s Norms

1983: 13.19
2006: 15.28
2009: 15.83
The Problem: Burnout

- High burnout = increase in:
  - Sickness days
  - Sickness spells
  - Sleep problems
  - Use of pain killers
  - Intention to quit work
Previous Workplace Studies

- **TrivLindenHof pilot** Netherlands – Chantal Mannak, You Power

- **Corporate Peak Performance Neurofeedback Project (2011)** Houston – Southwest Health Technology Foundation
CHANCE COLOR ASSIGNMENT TO 3 GROUPS

10 NFB RED SENSORS

T₁

Pre-Baseline

June - July 2016

10 NFB BLUE SENSORS

T₁

Midpoint

September 2016

10 NFB RED SENSORS

T₂

Post-Baseline

Nov–Dec 2016

10 NFB BLUE SENSORS

T₂

3 MONTHS (3 MONTHS POST NFB)

3 Months Post-Baseline

Feb–March 2017

T₃

T₄

3 MONTHS (6 MONTHS POST NFB)

6 Months Post-Baseline

May 2017

T₅

T₄

T₅
Findings: PSS–10

PRE | MID | POST | 3 MONTH | 6 MONTH
---|---|---|---|---
Control | Sham | NeurOptimal

2009 PSS–10 USA National Average
PSS–10: Significant Stress Reduction at 3 Month Follow-up

Perceived Stress Score

- P < 0.22 Not Significant
- P < 0.65 Not Significant
- P < 0.03 Significant
PSS–10: Highly Significant at 6 Month Follow-up

- P < 0.06 Not Significant
- P < 0.06 Not Significant
- P < 0.01 Highly Significant
Copenhagen Burnout Inventory

Personal Burnout Score

Sham
NeurOptimal
Control

P < 0.02 V. Significant
Copenhagen Burnout Inventory

Work-related Burnout

--- Quartiles

High

Low

P < 0.058 ~ NS
Copenhagen Burnout Inventory

Client Burnout

High

Low

P < 0.16 NS
Among employees with **above average** perceived stress levels prior to study, stress and personal burnout scores were **significantly** reduced by NeurOptimal® training.

These improvements were maintained 6 months post training.

Improvements in sham group were not statistically significant and were not sustained 3 months post training.
Implications for Future Studies

- Demographic data should be collected.
- Participants should be screened initially for comparable or minimum threshold baselines.
- Training and sham groups should not be trained close together in time / space.
- Larger groups would allow for the control of significant outliers.
Questions?
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