Effects of NeurOptimal Training

on Alzheimer's Disease. Report on an ongoing research in France

Alzheimer's disease

- Alzheimer's disease is characterized by the loss of neurons and synapses in the cerebral cortex and certain subcortical regions.

Results with NeurOptimal

- Astonishing improvements in patients suffering from this disease as shown in the 2012 Zengar Seminar.

- **Significantly improved by NeurOptimal sessions**

- The Neurofeedback Training by NeurOptimal significantly improved patients scores on the Ekman 60 faces Test within only 6 sessions.
- A functional improvement was reported by the spouses at the end of the program.
- The anxiety of the spouses decreased significantly.

Therefore a new experiment!

- After the success of the first test,

it was decided to proceed to a new experiment. The question was:

NEUROPTIMAL

=

PLACEBO EFFECT or

NO PLACEBO?

This time: definition of the pilot "feasibility" of the new study

- Subjects:
  - 16 patients (mean age 69,8; 3 females out of 16) 4 bvFTD and 6 PSP patients had NF and were compared to 2 bvFTD, 3 PSP and 1 DS patients in "placebo" condition.
- Neurofeedback
  - Six 33 min sessions.

Definition of the pilot "feasibility" study…

- Assessments:
  - For the patients:
    - Ekman 35 Faces Test ;
  - For the spouses:
  - Spielberger's anxiety Trait and State Inventory Perceive Stress Scale

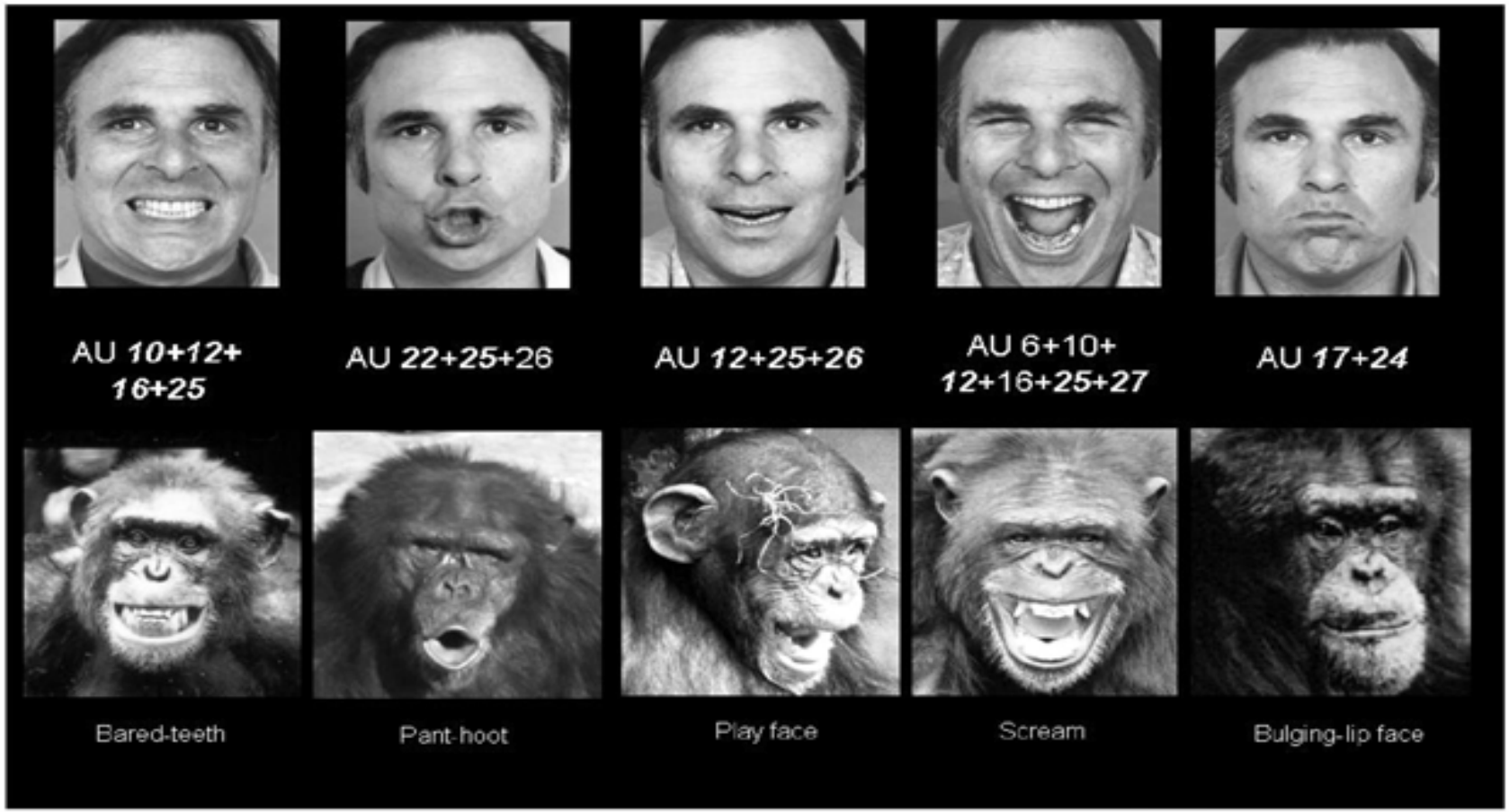
EKMAN TEST

Ekman's famous test of emotion recognition was the Picture of Facial Affect - POFA

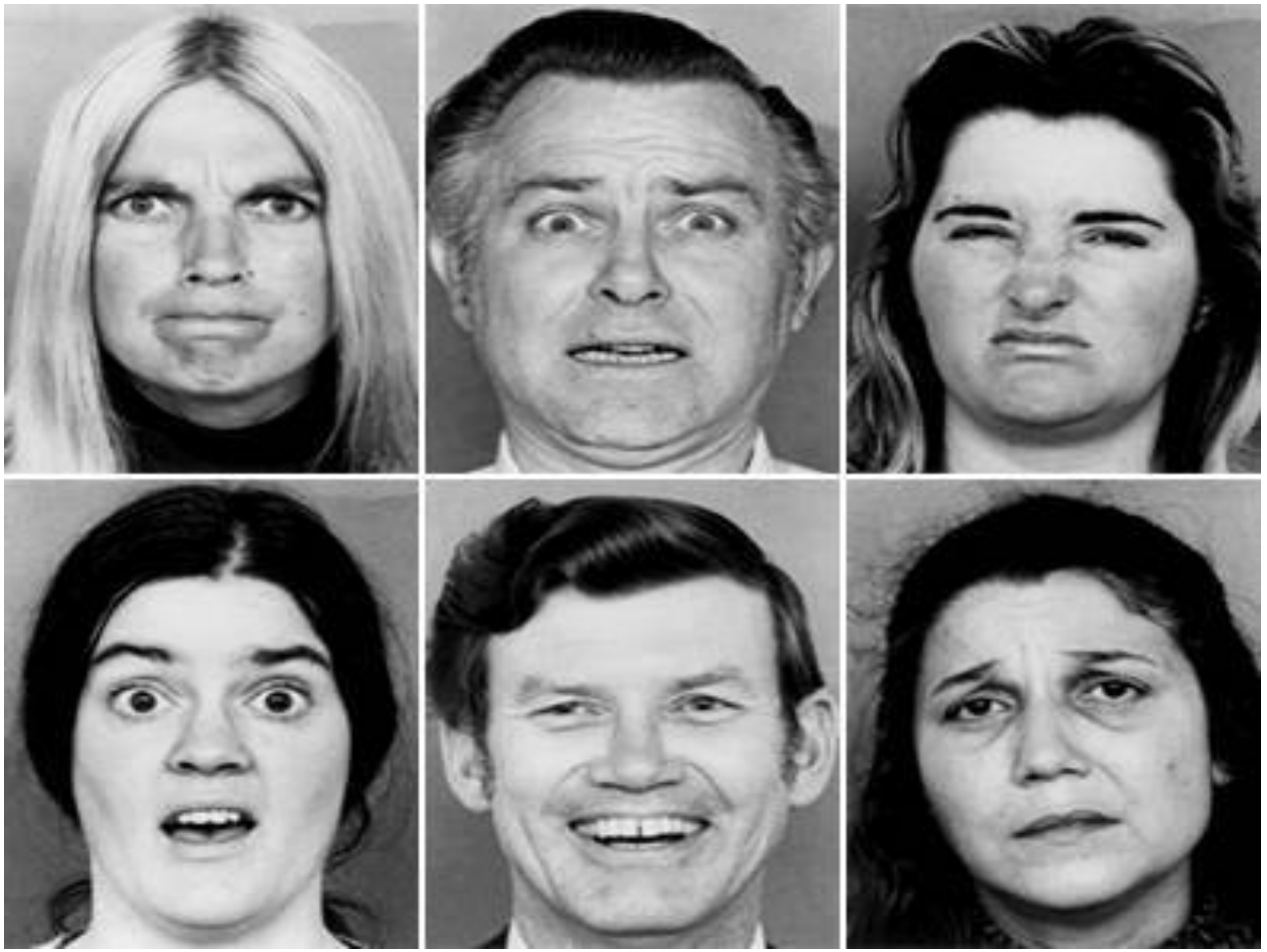
Through a series of studies, Ekman found a high agreement across members of diverse Western and Eastern cultures on selecting emotional labels that fit facial expressions.

Expressions he found to be universal including those indicating anger, disgust, fear, happiness, sadness and surprise.
The six universal emotions are accompanied by neutral expressions.

EKMAN TEST FACIAL EXPRESSIONS



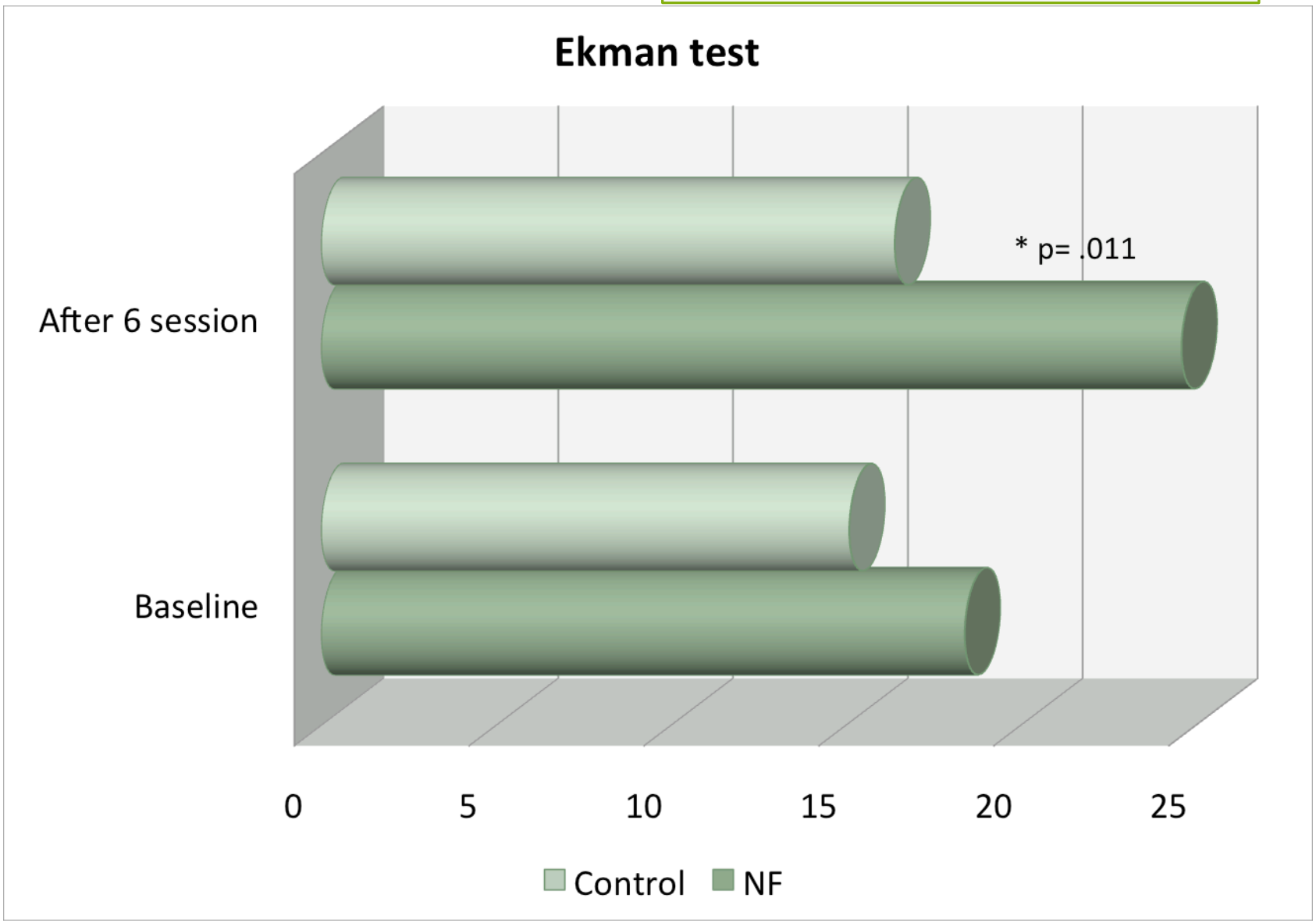
EKMAN TEST FACIAL EXPRESSIONS

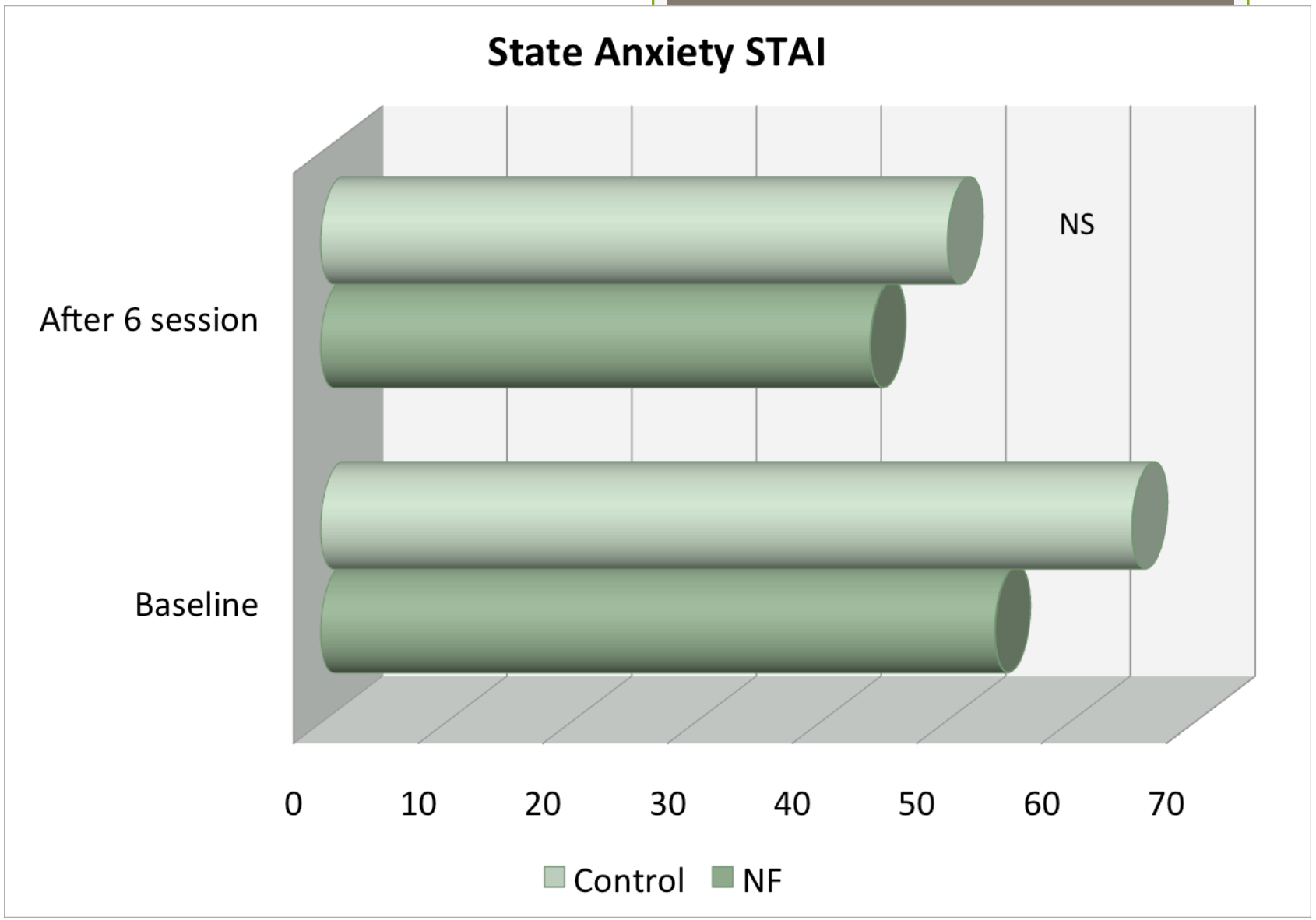


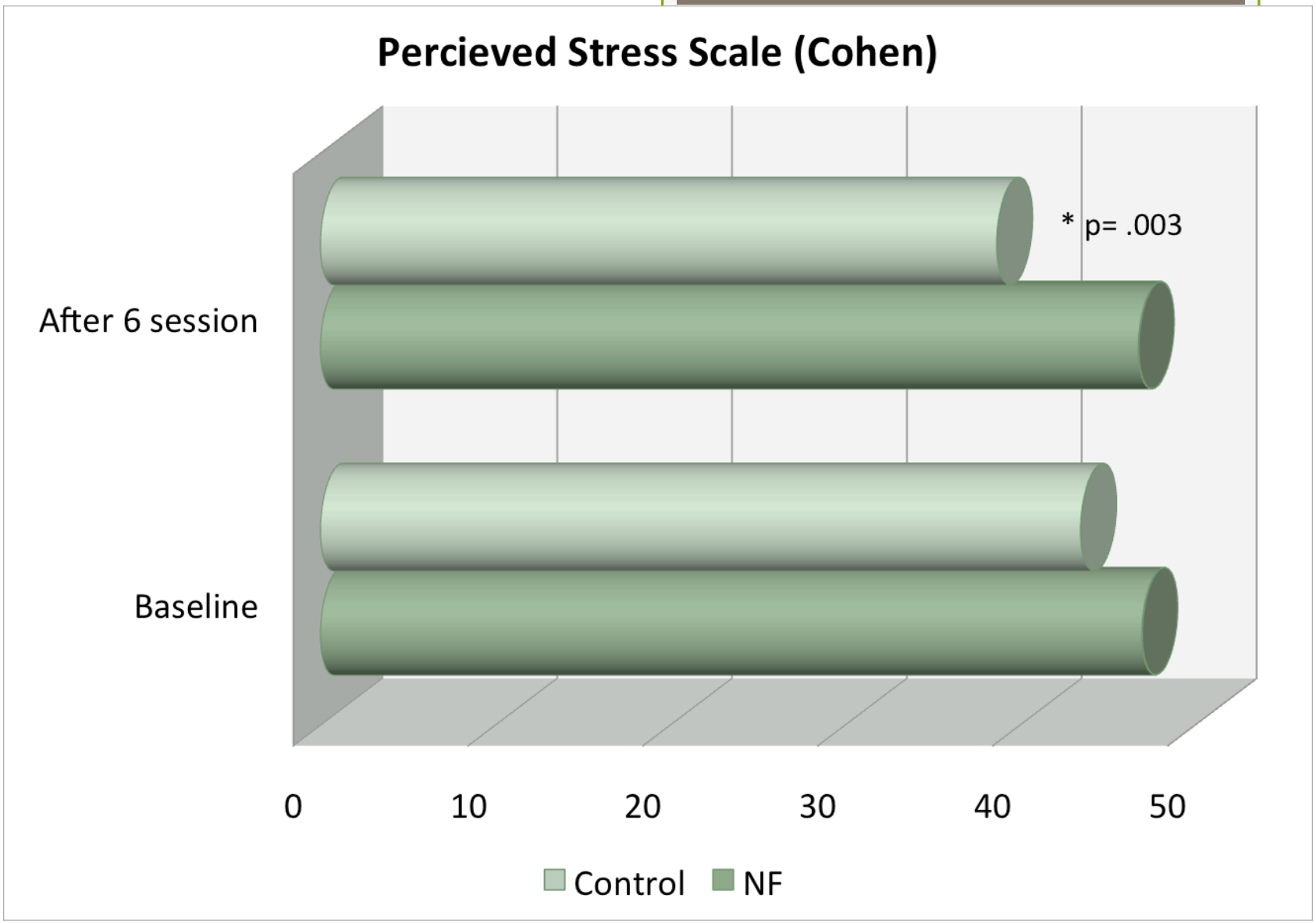
Telling them the strength of NeurOptimal Approach

- Non-verbal training. Privacy if needed.
- Painless: no electric current going to the person.
- Training can be done under medication.

- Alzheimer's could be seen as a lack of brain fitness.
- NeurOptimal® trains the brain to be more flexible and resilient. That's why without pushing the brain in any specific direction, the NeurOptimal® neurofeedback system interacts with the central nervous system in a way that improves neuro-plasticity.
- A mind that is more flexible adapts and responds quicker and more appropriately to changes in your environment. NeurOptimal® will also help build brain resilience, or an increase in the central nervous system's ability to "bounce back" from a negative event. Individuals with a more resilient brain report feeling happier and enjoying a more profound sense of peace.


Ekman test
* p= .011
After 6 session
Baseline
0
5
10
15
20
25
Control
NF


State Anxiety STAI
NS
After 6 session
Baseline
0
10
20
30
40
50
60
70
Control
NF


Percieved Stress Scale (Cohen)
* p= .003
After 6 session
Baseline
0
10
20
30
40
50
Control
NF

6 Neurofeedback sessions well accepted by patients

- Effects on the perception of the emotions
- Effects may be due to effects on attention
- Effects on empathy
- Effects on mood, impulsivity

And...the care of the caregivers

- Effects in spouses anxiety and perceived stress

- Overall NeurOptimal is NOT a PLACEBO!

Win-Win-Win

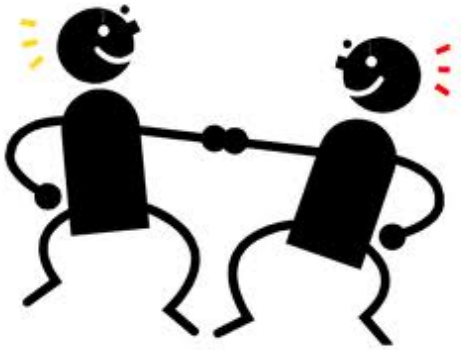
With this new study:

1 - NeurOptimal - No Placebo effect.

This test will be redone again and again until this fact is commonly admitted by the scientific community.

2 – Furthermore this study is a clear demonstration of the large possibilities of this profound discovery. There is still more to be experimented and discovered in many areas.

3 - NeurOptimal is much more than "Neurofeedback".

4 – I would encourage all of you to not only see NeurOpimal as a training tool to increase your income, but also as a humanitarian tool.

Thank you for listening