PRE-PUBLICATION NOTES ON
CZECH RESEARCH ON PBSP AT CHARLES UNIVERSITY

Visible effects of PBSP structure work seen in clients' neurological activity through functional Magnetic Resonance Imaging - fMRI

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Two studies have now been completed, both showing visible, significant, and measurable neurological changes in the brain scans of clients following two sessions of Pesso Boyden System Psychomotor work. Thanks go to all those who made this study possible: Jiri Horacek, the director of the study -- an expert in brain research, and professor of Neurology[?] at Charles University in Prague; Charles University for use of their equipment and space; Michael Vancura (a psychiatrist, and first coordinator/organizer and graduate of the Czech Republic PBSP Certification training program) and Yvonna Lucka who both helped coordinate the people for this study; all the clients who volunteered and allowed themselves to be tested; and Albert Pesso for giving of his time and PBSP therapeutic expertise.

The first study was a pilot study with one person. Due to the very positive results, a second identical study was planned and completed with 8 people. In both studies each client had two series of functional MRI brain scans done; one series of 8 scans before and the other series of 8 scans following having had, over a couple of days, two PBSP structures with Albert Pesso. In both studies there were very interesting results that strongly indicate significant positive changes were made in the clients' brain arousal presumably due to the structure work in PBSP. This change is visibly evident and recorded in the functional MRI brain scans.

The clients for this study were normal people who were selected on the basis of their each having had some traumatic history. Before any testing or structure work began, the clients were asked to find and bring two photographs, one of them was to be a photograph that stirred up disturbing emotions for them – i.e. that had the effect of awakening their traumatic history, and the other photo "benign", i.e. that was calming and not disturbing in any way for them to look at.

Inside the functional MRI machine there is a viewing screen which the clients could see and were told to watch while their brains were being scanned. The first photo they were shown was the one each client had selected as being arousing or awakening of their traumatic history, and a scan was done as it flashed on the screen. Then they were shown the benign photo they had chosen and a scan taken again in the same way as the first. This pattern was repeated four times for a total of eight scans, four with the disturbing photo and four with the calming photo. Then, over a period of a couple of days, each client had two PBSP structures in a group setting with Albert Pesso leading their structure work. After another day or two the clients returned to the lab for a second session of eight fMRI brain scans identical to the first set – i.e. with the same photos being shown again in alternating fashion exactly as before.

The first study

The client, like the others chosen for the second study, had a traumatic history, but was otherwise classified as normal. Yet, when she was shown the disturbing photo, her brain went into a pattern which is identical to the continual brain pattern typically found in patients with an obsessive compulsive disorder. It is a kind of looping pattern. The client from the first study did not have that disorder and as expected, her brain was completely normal during the viewing of the benign photo.

What was so encouraging in the results of the first pilot study was the marked contrast between the disturbing-photo fMRI images taken before the structure work versus the disturbing-photo fMRI images following PBSP structure work. Following having had the two PBSP structures, the looping pattern which had appeared during the first set of brain scans, completely disappeared.

The second study
It is clear from the second study with eight clients who had traumatic backgrounds, that the first study results were not a fluke. The second study clients' post-structure work fMRI images appear again to show that the clients gained more control over their emotions. And there are other indicators of interest that Dr. Jiri Horacek is currently assessing: It appears that different areas of the brain become operant post-structure-work that weren't before. Dr. Horacek is identifying what areas of the brain they were and how significant those changes were.

Following the complete evaluation and interpretation of these results Dr. Horacek, who is an expert in this field, will write an article to be submitted to a scientific journal.

Scientific Objectives

The effect of PBSP therapy as seen on the emotional brain activation in posttraumatic stress disorder through functional magnetic resonance imaging (fMRI study)

The primary objectives:

1) to identify the brain regions activated in fMRI by the emotional stimulation related to the trauma in PTSD
2) to verify the effect of PBSP on the brain activation (fMRI) in traumatized people.

Study population:

A group of 5 to 7 people with PTSD diagnosed according the DSM-IV 18-65 years

Study procedure:

The people fulfilling inclusion criteria will be treated by PBSP. At the beginning and at the end of the treatment the intensity of symptoms will be measured by the psychometric scale for anxiety (HAMA), depressiveness (BECK, HAMD) and specific PTSD symptoms (IES).

The fMRI investigation will be performed twice: before and after the treatment. During the fMRI investigation the people will be exposed to the emotional stimuli relevant to the individual form of trauma, and in the period of deactivation (rest) the alternative emotionally neutral stimuli will be used. By the use of SPM99 software the voxel-to-voxel analysis will detect the brain areas with different activity in emotional stimulation comparing with neutral stimuli (the first level). In the second level analysis the paired comparison between pre- and post- treatment will be performed and the areas of different activity post treatment will be detected as the correlates of the clinical and physiological effect of PBSP.