

## Wholebody Focusing Neuroscience Brain Scans on Client "X" after 2 Years

By Alex Maunder (June 2014)

The results of the WBF Brain Scan research pilot study have been very impressive. This client was diagnosed to be suffering from anxiety and depression two years ago, There were 3 main areas of particular concern.

Firstly, at the baseline scan on 3/13/12, there was decreased temporal lobe and parietal lobe activity which made a slight improvement directly after one WBF session on 3/14/12 and a dramatic and long term improvement is shown two years later on 3/17/14. ( See brain scan images at the bottom of this pdf).

**The Temporal Lobe** regulates: emotional stability, understanding & use of language ! retrieval of words, long-term memory, reading social cues, reading faces, picking up on verbal intonation, auditory & visual learning. My client did recognize that he had memory problems, learning problems, language problems in finding the right words, social phobias when he could not correctly interpret facial expressions and verbal intonation, moods swings, headaches, periods of anxiety and periods of spaciness/confusion.

**He now feels much more socially at ease, with greater mood stabilization, a greater ability to find the right words to express himself with and as a result increased self-confidence and emotional stability ! He is also able to correctly interpret facial expressions and tone of voice without getting triggered (which would normally have then added to his suppressed anger and anxiety and so fueled a vicious circle). His periods of anxiety and feeling spacey/confused have significantly decreased. He has said that he now feels in control of his life and much happier as a result.**

**The Parietal Lobe** regulates how we process all of our sensory information input, also spatial processing & sense of direction, ability to read maps, visual guidance of hands & limbs, distinguishing left from right, admitting when you have a problem.

My client recognized that he suffered from sensory overload at times, feeling ungrounded, trouble with directional sense and a right/left confusion, For large periods of his life he was also unaware that anything was wrong or that he had a problem - as it was always the other persons fault !

**He now feels much more grounded for large parts of the day, able to process sensory information coming in with a sense of spaciousness, and a greatly improved directional sense and ability to**

**navigate his car.**

So improvements in these two areas - basically mood stabilization, improved ability to find the right words and sensory integration, are bang-on-target for what you would expect from the integration of Focusing/Wholebody Focusing insights into daily life. It still raises the question that if you had problems in other areas of the brain and impaired brain function there - would it help? This is impossible to say from a pilot study and that's why we are going to need a large scale study to see if there would be generalized improvement in these specific areas alone or in other areas that were also malfunctioning.

We do have a partial answer here in this pilot study, in that **The Prefrontal Cortex**, the executive control function which regulates our ability to focus, plan, organize, think ahead, control impulses & make good decisions - this was showing areas of under-activity in the baseline scan on 3/13/12. Not much difference after 1 WBFocusing session and it has even got slightly worse two years later. **My Client admits to still feeling slow to focus and confused at times, with bad time-keeping and planning, but he maintains that he is able to make better long-term decisions through being more in touch with his feelings.** So on a general level we could speculate that Focusing is not a technique that increases your concentration and cognitive alertness in the prefrontal cortex. But that could be because there is not a 7<sup>th</sup> Action Step included in Focusing or WBF. As Gendlin himself now says, a positive action step should now be included at the end of a Focusing session. I believe that this would then lead to a better level of brain integration, with more Prefrontal Cortex activation.

There are also active SPEC brain scans which can see with great clarity deeper into the brain. My client showed greater than normal activity in the **Deep Limbic System/Thalamus region**. This is the survival response of the amygdala which can trigger the fight/flight/freeze response, carries our most charged memories and can set the emotional tone of a person's life. It also modulates motivation, and sets the appetite/sleep cycles and regulates the libido. **My client acknowledges having low motivation/energy at times, sleep problems, low self esteem and inward directed sadness, at times.**

The same is true of the **Basal Ganglia System** which sets the body's idle, sets anxiety levels, mediates pleasure and modulates motivation. **My client admits to still feeling irritable, tense, very motivated and yet anxious and conflict avoidant at the same time.** This increased activity in the Deep Limbic System and the Basal Ganglia system has not got better over the 2 year period, which would either suggest that he still feels

in survival mode in his life situation to a certain extent or he may be caught in the conflict of the freeze response, where there is both an arousal and a relaxation at the same time, so the tension does not get released into enough activity.

I am a bit surprised at this result because I really thought that Focusing or Wholebody Focusing would transform or at least modulate the trauma/survival response in the deeper emotional centres. We can learn something from these preliminary results and I would speculate that there is some sort of loop in operation here that still gets triggered and energy and intention needs to be released into a positive action step, in order to change the outer situation in areas that were found to be too demanding before, and perhaps it might be necessary to integrate some EMDR with Focusing for work with trauma that took place early in childhood.

There is also an increase in **Brainstem activity** in the active scan, which is good and to be expected as the WBF training increases sensory feedback which is all transmitted through the medulla to the Cerebrum and Cerebellum.

So where do we go from here ? I think more people need to get involved now. Who would you suggest from your community ? Who has the experience, the interest and the time for this ?

The psychiatrist who analyzed the results, Dr Garrett Hallweg at the Amen Clinic was impressed. He noted the big improvements that had occurred over the last two years and said that deterioration in the temporal lobes and the parietal lobes normally just gets worse, not better - They very rarely see an improvement in these areas, so evidence of neuroplasticity here is very encouraging.

The Clinical Psychologist who performed the EEG evaluations, Dr Christine Kraus wrote: " Overall it appears that the therapy that was addressed within the various sessions increased visual and sensory awareness to one's self and increased the relaxed focused state. It appears that session 5 (the Wholebody Focusing session) also enhanced the super learning or creative spiritual thought process as Theta was increased as well". (Dr Kraus, Amen Clinic, Newport Beach).

More information on this research project is available on my website:  
[www.wholebodyfocusing.org](http://www.wholebodyfocusing.org)

**Brain Scan Images:**

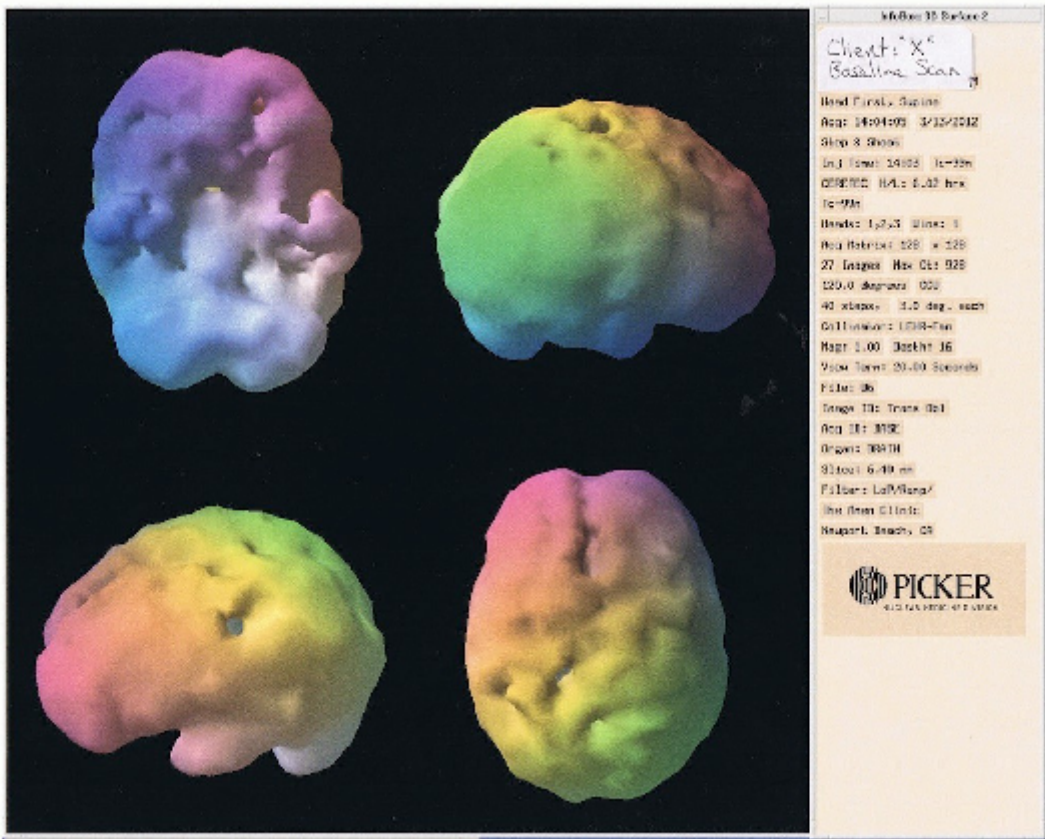


Fig. 1 X Surface Baseline Scan

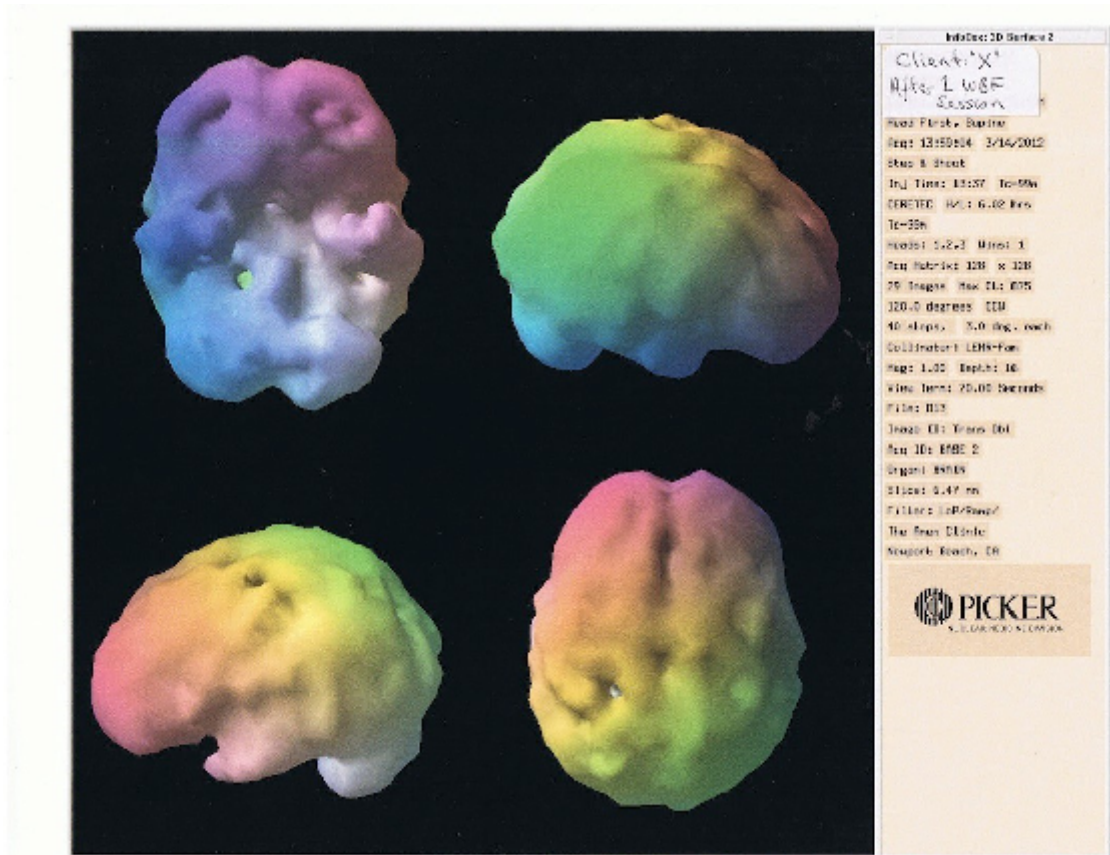


Fig. 2, X Surface after 1 WBF Session

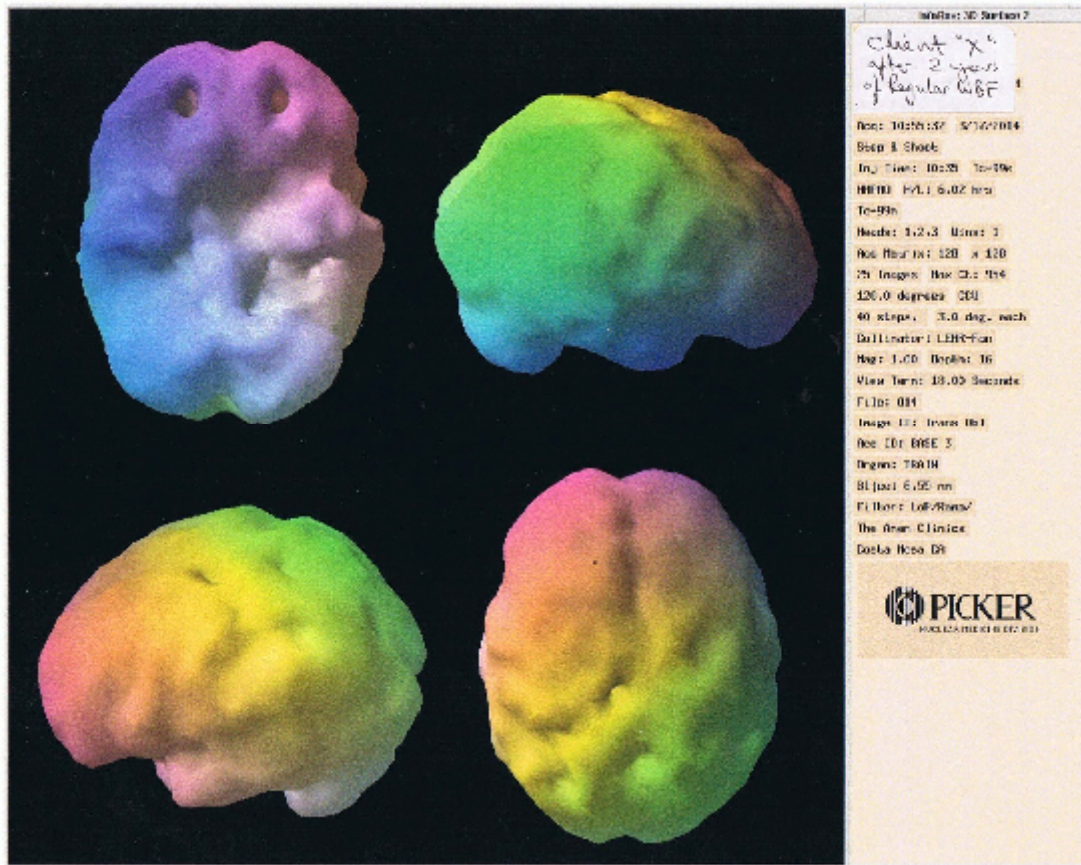


Fig. 3, After 2 years WBF Sessions



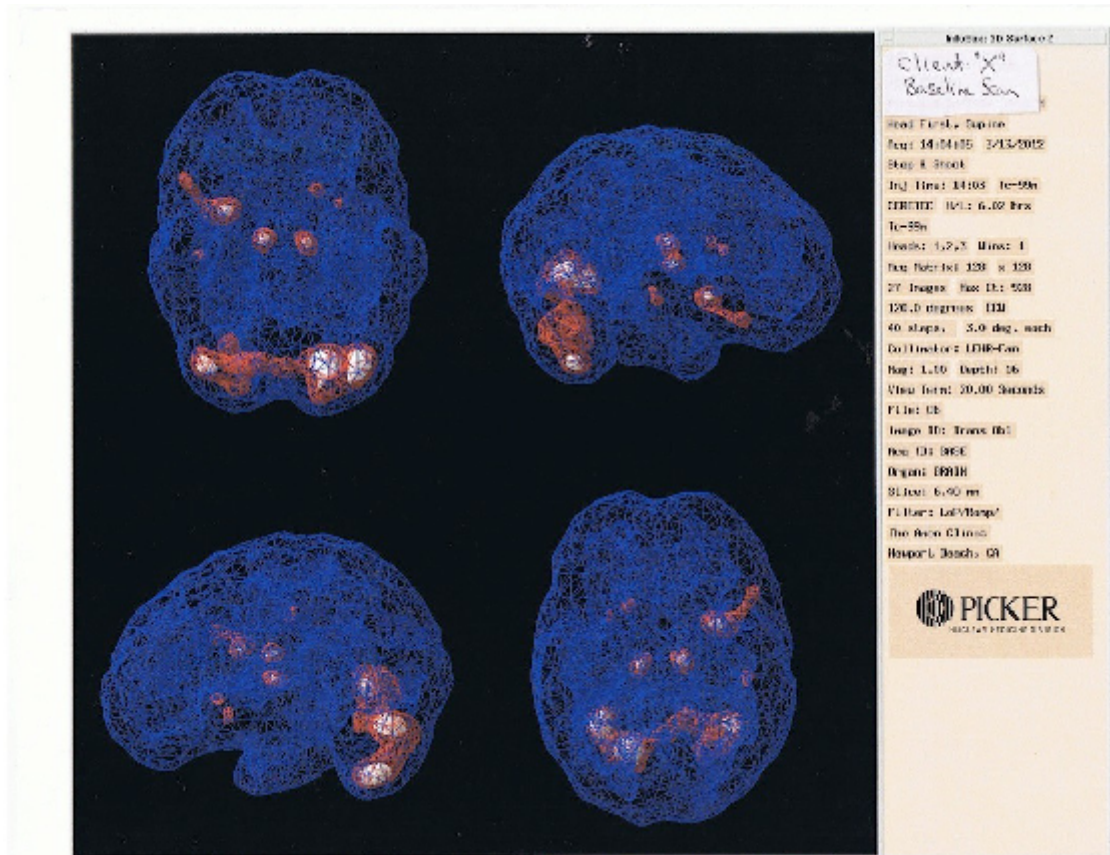


Fig. 4, X Active Baseline

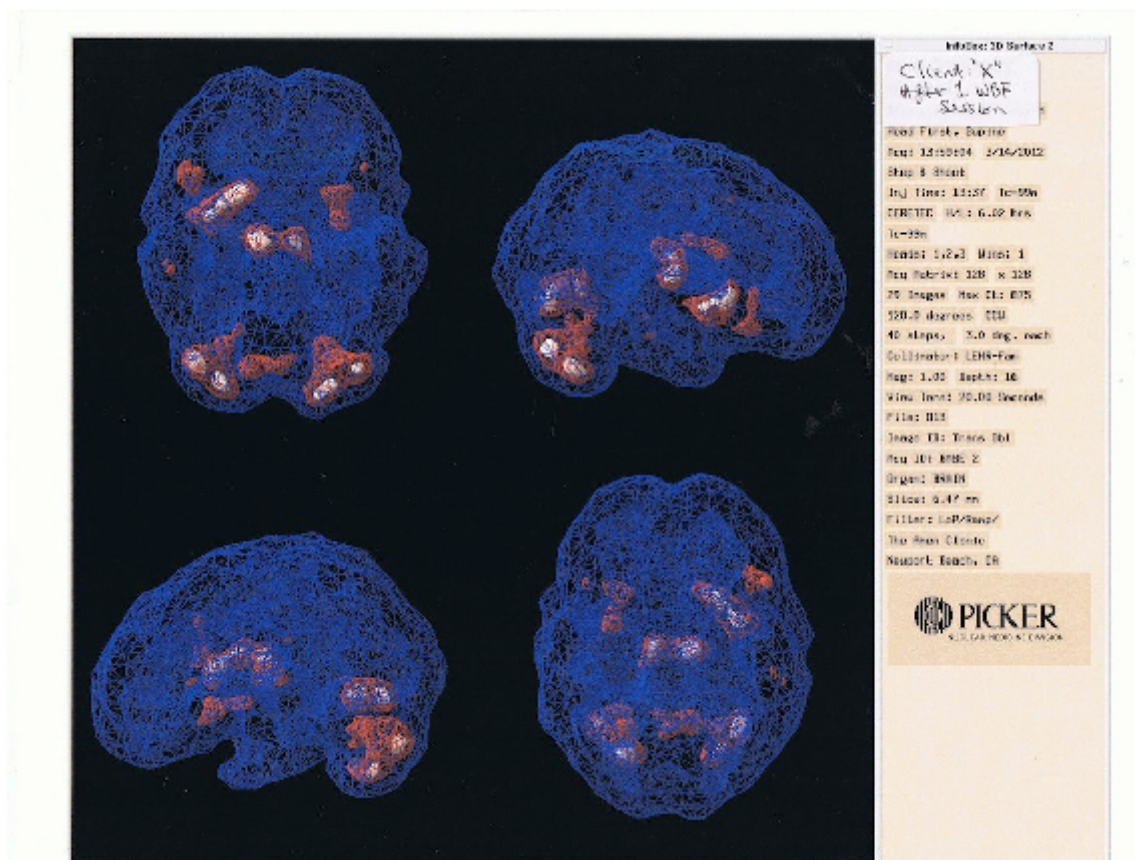


Fig. 5, X Active After 1 WBF Session



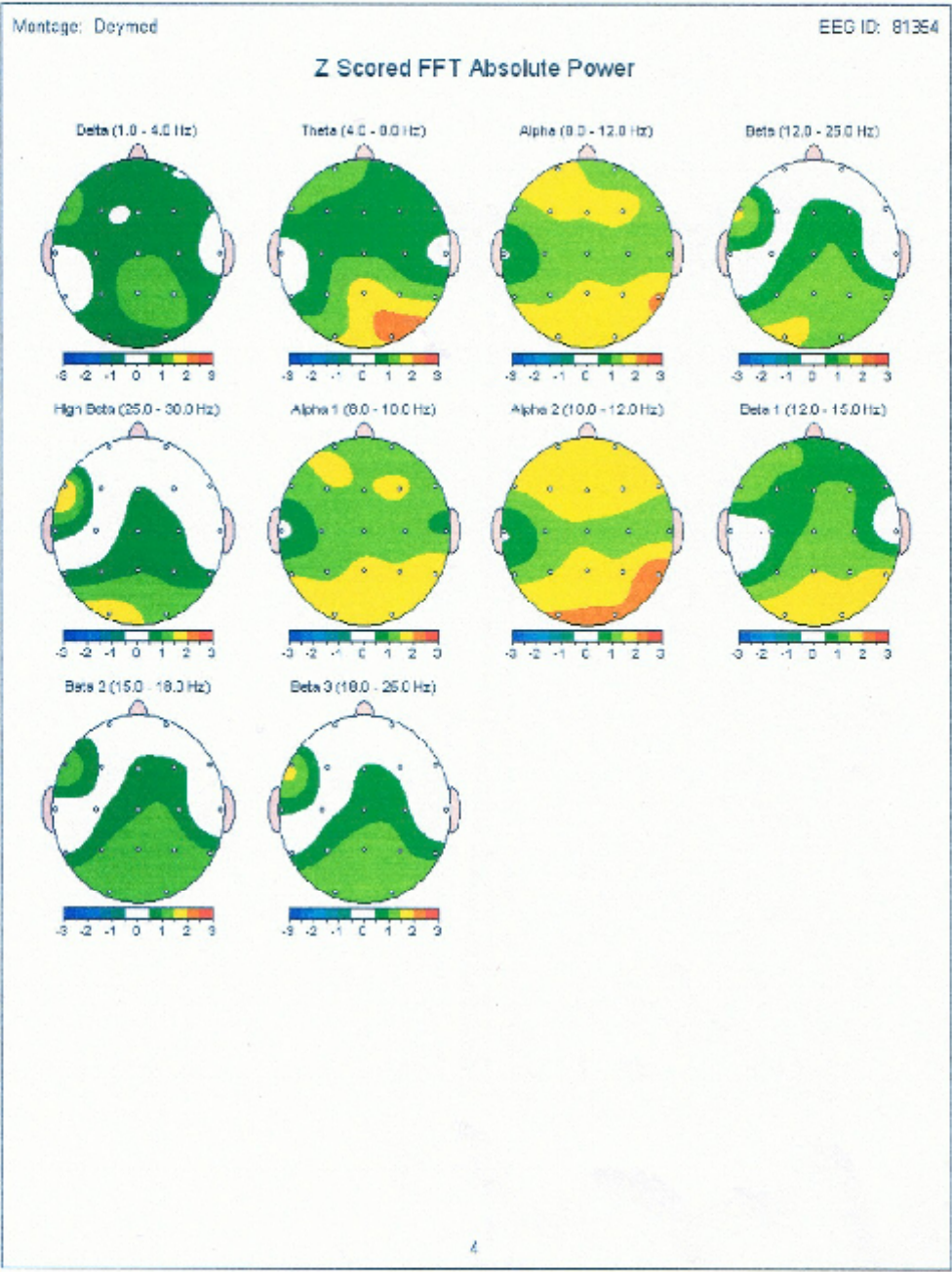


Fig. 6, qEEG Brain Scans, showing increased Alpha & Theta wave activity (right side predominant) during a WBF session.