REPORT CREATED FOR:
Name of Provider: (Your Clinic or Practice Name)
Contact: (Name of practitioner)
Email Address: (Provider email address to send report to)

ClinicalQ Report

RE: (Client Number)
Report Date: 2016-08-25

Table of Contents

I. Client Information and History

Client ID: (Client Number)

Gender: Male

Age: 29

Handedness: Right

Date of ClinicalQ Assessment:

Medications:

Reported symptoms/conditions: Anxiety, Depression, Sleep disturbance.

II. Neurofeedback, Braindriving, and Biofeedback

Neurotherapy training includes measuring remarkable areas found during EEG assessments and training towards normative or clinical norms. Neurofeedback, a form of neurotherapy, is based on operant conditioning principles, which allow a client to train the brain towards optimal levels of functioning. This is achieved from levels of brain reorganization, as well as increased client self-awareness and self-regulation. Biofeedback training other than EEG biofeedback is also available when clinically appropriate. Biofeedback measures can include training in heart rate variability (HRV), respiration, respiratory sinus arrhythmia (RSA), temperature, muscle tension (EMG), and skin conductance regulation. Braindriving techniques involve the use of various types of stimulation that are contingent on brainwave activity. Different forms of braindriving stimulations include harmonic sounds, visual strobe stimulation, micro-amperage stimulation, pulsed electrical magnetic fields (pEMF) and low energy neurofeedback.

III. ClinicalQ EEG Analysis

The ClinicalQ Assessment is derived from a clinical data base (i.e., EEG records from individuals who report clinically significant symptoms). The data base contains over 1500 clinical clients. The organizing logic is that clients who report a condition (e.g., depression) have a neurological representation of that condition. Based on the diathesis vulnerability model, the condition reported by the client is one that is associated with a neurological predisposition that has manifested. An important distinction to note is that the following report is not based on departures from the EEG functioning of non-symptomatic individuals. Rather, the report is based on the similarity in EEG patterns/measures to those individuals with self-reported clinical conditions.

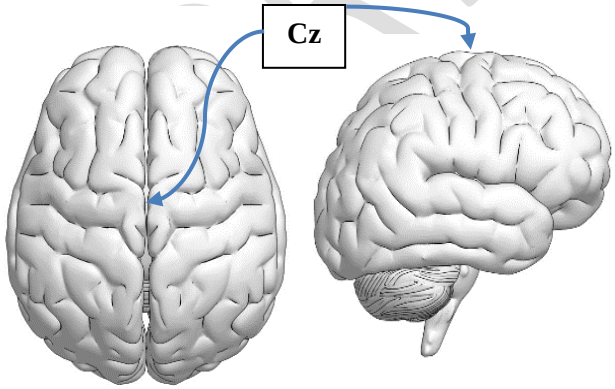
The ClinicalQ utilizes 5 sites including: **Cz** (top of the head), **O1** *(occipital region of the brain – back of the head)*, **F3** and **F4** *(left and right frontal cortex)* and **Fz** *(midline at the front of the head)*. Brainwave ranges recorded included Delta (2 cycles per second - Hz), Theta (3-7Hz), Alpha (8-12Hz), Sensory Motor Rhythm (SMR – 13-15Hz), Beta (16-25Hz), Hibeta/Gamma (28-40Hz), Low Alpha (8-9Hz) and High Alpha (11 -12Hz).

The following report is based on reports from clients with patterns similar to those identified in the present ClinicalQ recording. *This is NOT diagnostic.* The report presents common client reports found to be statistically associated with specific brainwave characteristics. The more qualitative descriptions of the client's condition derive from client reports that have been found to be statistically related with specific combinations of multiple remarkable EEG features. This report is computer generated identifying symptoms reported by clients with EEG characteristics statistically comparable with the client whose EEG data have been entered for this report.

It is important to understand that this report does not replace the clinical feedback from the neurotherapist. There are qualitative features associated with the ClinicalQ data augmented by other data obtained during the clinical interview that are vital to consider for the development of therapeutic strategy. This report gives feedback on common client reports of symptoms associated with neurological markers at levels that have the highest statistical probability. Clients whose neurological markers are below the statistical thresholds may have symptoms consistent with these lower level departures from clinical norms. The neurotherapist will be able to interpret these conditions, often called shadow symptoms, based on consideration of the entire ClinicalQ EEG data in the context of the client's reports of presenting symptoms.

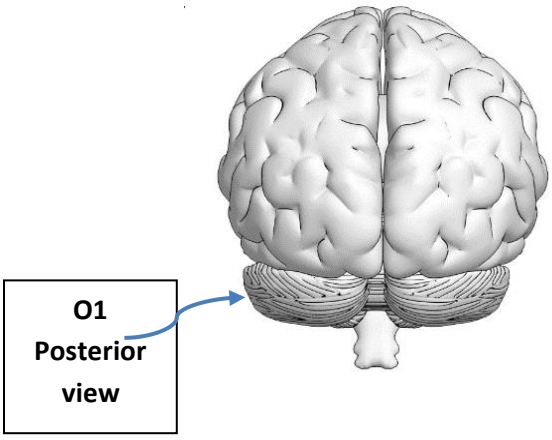
Location Cz:

Low Alpha response at location Cz is associated with client reports of poor retention of information, problems with visual memory processing, short-term memory deficiencies and with exposure to intense emotional stressors.



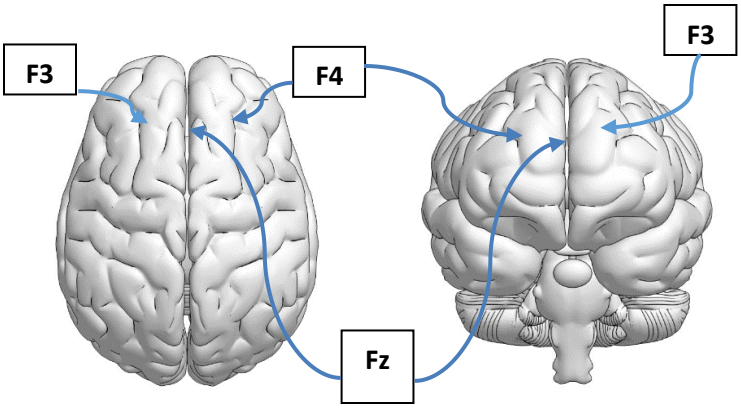
Location O1:

Low Alpha response at location O1 is associated with client reports of exposure to intense emotional stressors. Problems with short term memory have also been reported.



Deficient Theta/Beta ratio at location O1 is associated with client reports of poor stress tolerance, racing thoughts, poor concentration, anxiety, and inability to self-quiet. At more severe levels of deficient Theta/Beta ratio, clients report problems with substance abuse, addictions, severe anxiety conditions, sleep disturbances, essential exhaustion and related depressed mood state.

Low Theta/Beta ratio with eyes closed at location O1 is associated with client reports of sleep quality problems and difficulties with being able to relax. When this ratio is considerably greater than the eyes open ratio clients often report: history of cannabis use; long term exposure to psychotropic medications; recent viral infection.



Location F3 and F4:

When the amplitude of fast brainwave activity is greater in the right side (F4) of the frontal part of the brain, clients often report that they are experiencing depressed mood states or that they believe they are more prone to descend into such states. These predispositions can remain latent so many symptom free individuals may have such predispositions that have not manifested. Cognitively, whenever there is an imbalance in brainwave amplitude between the two frontal regions of the brain clients often report some intellectual inefficiencies such as problems with recall, mental "sluggishness" and the like. These cognitive implications associated with imbalances tend to be reported by clients even if they do not report effects on mood states.

When Alpha amplitude is greater in the right side (F4) of the frontal brain region parents often report oppositional and defiant behaviour. Problems with social skill development are also reported and this profile is also frequently observed in children diagnosed with autistic behaviour. In adult clients, reports of problems with social interactions and current social problems (e.g., problems with a relationship) are also commonly reported.

Elevated Theta amplitude in the right prefrontal cortex (F4) is associated with client reports of emotional volatility. Mood swings, irritability, hyper-emotionality are all commonly reported. Conversely, this profile can also be related to client reports of restricted emotional range particularly with males.

Location Fz: (in the middle of the forehead)

When the high frequency amplitudes ratio is low in the frontal midline location (Fz) clients report conditions associated with passiveness, often reporting that they feel that they are insufficiently assertive in personal relationships, public and work environments. Intimate partners often report more positive features including openness and easy going dispositions.

Elevated high frequency amplitude in the frontal midline location (Fz) is associated with client reports of fretting and worrying. Problems with letting go of troublesome thoughts is also commonly reported.

IV. Clinical Summary

Reduced Alpha response is regularly found with clients who have been exposed to severe emotional stress.

When the blunting is in the central region of the brain clients more commonly report that the stressful conditions are currently occurring or have been in the recent past.

Blunting at the back of the brain is usually associated with exposure to severe emotional stress that occurred in the past although in some circumstances it is also observed when the stress is current.

Alpha blunting is probably best understood as a numbing response to reduce emotional anguish associated with the distressing experience. As the emotional angst lessens the Alpha response often strengthens.

When Alpha is elevated in the right frontal brain regions relative to the left, clients commonly report problems related to conditions such as workplace bullying, marital/couples break-ups or other serious interpersonal conflicts.

Elevated activity in the mid-frontal region of the brain is associated with client reports of perseverative thought processes, fretting and worrying. This elevated activity can be problematic for clients with the blunted Alpha stress marker. Clients report that they fixate on issues; "cannot get it out of my head." This pattern also appears to interfere with efficient dispensation of the agonizing emotional memory associated with historical traumatic experiences.

VI. ClinicalQ EEG Bibliography

The following Bibliography is provided to illustrate a sampling of the research that contributes to our evaluation and treatment processes based on the **ClinicalQ EEG assessment.**

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