

In our main project study we have gathered nearly 2000 completed web questionnaires to examine further differences between OBErs and non-OBErs. This includes a comparison of OBEs experienced spontaneously, as part of and NDE, and as part of a meditatively, drug or alcohol induced experience. Analysis of this data is underway and will be reported when available.

163/04 - "Effects of different Biofeedback training procedures on quantitative Electroencephalographic parameters of healthy subjects"

Instituição/*Institution*: Brain Resource Company B.V., Nijmegen - The Netherlands

Duração prevista/*Estimated duration*: 2005/01 - 2006/03

Investigadores/*Researchers*: Dr. Martijn Arns, Dr. Wytze van der Zwaag, Dr. Erica Heesen, Dr. Rien Breteler

Abstract: Objectives: Both GSR and SCP have been associated with epilepsy. These measures may be different expressions of a single underlying neurophysiological (arousal) system. Learning curves of volitional control of GSR and SCP after feedback will be investigated, and compared to changes in simultaneously measured spontaneous SCP and GSR. Effects of training on QEEG profiles and neuropsychological functioning will be assessed.

Methods: Eight men and 11 women were randomly assigned to either a GSR biofeedback condition or an SCP neurofeedback condition. GSR and SCP were measured in both conditions. Each subject participated in 24 sessions of four runs, consisting of 40 trials each, in which pseudo-randomly increases and decreases in SCP or GSR were trained.

Results: For the GSR feedback a polynomial curve was found to fit the data best. An increase in arousal (increase in GSR) appeared to be learned slightly better than a decrease. Four out of 10 subjects showed evidence of discrete self-regulation of their GSR.

For the SCP feedback, preliminary analyses suggest a flat linear learning curve (regression coefficient $r=0.033$). Again, an increase in arousal (cortical negativity) appeared to be learned slightly better than a

decrease. Three out of 9 subjects showed evidence of discrete self-regulation of their SCP's.

Conclusions: Interrelationships of GSR and SCP grand averages over sessions and changes from pre to post QEEG and neuropsychology will be discussed.

The polynomial curve for the GSR group suggests GSR was easier to learn, further supported by the individual results. Future studies should focus on these effects in epilepsy patients.