Does cortical excitability predict out of body experience and anomalous perception in the non-clinical population?

ABSTRACT:

It has been suggested that individual differences in cortical excitability may explain why some people have out of body experiences (OBE) in the absence of any known pathological or psychiatric condition. Here we recorded EEG from people who either had, or had not experienced an OBE in order to investigate the neural dynamics of OBE in the non-clinical population. Specifically, we measured visually induced perturbations to on-going EEG activity, as well as resting levels of baseline EEG power, in order to test the hypotheses that EEG variables reflecting the timing and integration of visual information processing and the balance of neural excitation : inhibition may differ between those who have had an OBE and those who have not. A screening questionnaire was completed by 551 people, 24% of whom reported having at least one OBE. Participants who were free of any psychiatric or neurological diagnoses, including migraines, were invited to take part in EEG recording. EEG data were obtained from 19 people who had had an OBE and 20 who had not. Amplitude of the P1 ERP deflection, consistency of alpha-band phase locking and spontaneous gamma-band power were significantly reduced in the participants who had had an OBE. These results provide support for the claim that cortical differences, particularly with respect to the timing of visual information processing, may give rise to OBE in clinically healthy individuals. To our knowledge, this study is the first to compare EEG variables obtained from people who have, and have not, had an OBE.

Keywords

Out-of-body-experience, EEG, Alpha oscillations, Inter-trial coherence, Anomalous perception

Published Work:

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