

Papers

First-episode psychosis and direction of wave propagation at 1 Hz in the EEG

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Background: EEG measures of power and phase synchrony are related to symptom factors in subjects with first-episode psychosis (FEP). This study uses a new dynamical measure that detects event-related episodes of long-wavelength activity in the EEG.

Methods: Data were acquired from 56 subjects with FEP and 112 matched controls. Positive and Negative Syndrome Scale was used to calculate three-factor scores for reality distortion (RD), psychomotor poverty (PP) and disorganization (Dis). EEG was measured during an auditory oddball task at 26 electrodes. The spatial patterns of phase gradients across the scalp were assessed using three orthonormal basis functions: anterior-posterior, peripheral-central and right-left. Correlations of the relative phases with each of the basis functions are denoted rAP, rPC and rRL, respectively.

Results: The FEP group had greater values of rAP at ~1 Hz than the controls, and rAP at ~1 Hz correlated with PP, $r = -0.57$. The FEP group had greater values of rRL at ~1 Hz than the controls, and rRL at ~1 Hz correlated with RD, $r = 0.55$ and Dis, $r = 0.53$.

Conclusions: In the approximately 1-Hz range, the FEP group showed directional differences in wave propagation, compared with controls. The greater tendency of the subjects with FEP to engage in right to left wave propagation was indicative of higher scores for RD and Dis. The lesser tendency of the subjects with FEP to engage in posterior to anterior wave propagation was, however, related to lower scores for PP. Differences for FEP in the global coordination of cortical inactivation are directly related to symptom clusters.

Psychotic-like experiences in a community sample of adolescents: associations with distress, depression and functioning

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Background: Previous studies have shown that young help-seeking people with psychotic-like experiences (PLEs) are at ultrahigh risk of developing a psychotic disorder. However, not all people with PLE go onto developing a psychotic disorder. It is important to identify whether some PLEs are more likely to progress to frank psychotic disorder than others and whether there are any associated features that make progression more likely.

Methods: We carried out a community survey of year 10 students. Sixty secondary schools were approached to participate in the study, 34 consented. All year 10 students attending these schools were invited to participate. Students were administered the Community Assessment of Psychotic Experiences (CAPE), the Centre for Epidemiologic Studies Depression Scale (CES-D) and the General Health Questionnaire-12 (GHQ-12). These self-report questionnaires measure psychotic symptoms, depressive symptoms and level of functioning. A sample of 883 students completed the survey.

Results: PLEs were highly prevalent in the sample. Nearly all participants (99.1%) reported that they had experienced one or more PLEs at least 'sometimes'. Nearly one third of the sample endorsed at least half of the items. PLE data were factor analyzed, and the associations of psychotic subtypes and distress, depression and functioning level were examined. These data will be presented.

Conclusions: This is one of the first studies that found that PLE is commonly experienced in a community sample of adolescents. Further research is needed to explore the significance of this finding.

Stability of psychotic-like experiences over 6 months in a clinical sample of non-psychotic young people

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Background: Psychotic-like experiences (PLEs) increase the risk of schizophrenia and other psychotic disorders, yet are common in the community. Not everybody who experiences PLEs develops a psychotic disorder. It is important to understand the way in which the presence of PLEs is a risk factor for the development of a psychotic disorder. The aims of this study