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Introduction: Social anxiety (SA) is a dimensional psychological trait that unfolds as a continuum from normality to pathology. While studies have focused on brain response when individuals are exposed to social situations, little is known about neural correlates of trait SA in the absence of any social triggering.

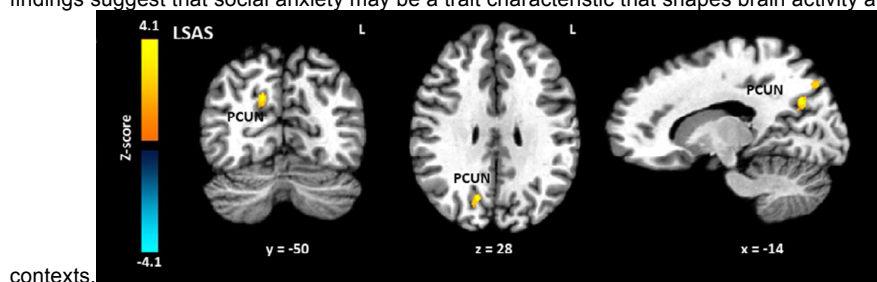
Aims: To test the hypothesis that brain resting state activity is modulated by trait SA, we measured the Hurst Exponent (HE), an index of complexity of time series, in healthy individuals.

Methods: Resting-state fMRI time series were recorded in 36 subjects (16 F; mean age \pm S.D. = 26 \pm 3 years). All volunteers were healthy without any psychiatric, medical and neurological disorders. Each subject completed the Liebowitz Social Anxiety Scale (LSAS).

HE was estimated by using the discrete second-order derivative approach and its relationship with social anxiety was tested across the whole brain.

Results: LSAS scores predicted HE in the posterior cingulate/precuneus (significant positive correlation).

Conclusions: Our results indicate that the brain pattern of spontaneous activity is influenced by the degree of social anxiety, as a continuum. Moreover, as this relationship between the degree of SA and brain activity was found at rest in the absence of any relevant social stimuli, our findings suggest that social anxiety may be a trait characteristic that shapes brain activity and predisposes to abnormal reactions to social



contexts.