

PEDOPHILIA IS LINKED TO REDUCED ACTIVATION DURING EXPECTANCY AND EXPERIENCE OF VISUAL EROTIC STIMULATION IN THE DLPFC AND HYPOTHALAMUS

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Pedophilic patients are sexually attracted to prepubescent children and can be characterized by emotional immaturity and attentional deficits whereas they show no sexual interest towards adults. Underlying neural mechanisms were investigated using functional magnetic resonance imaging (fMRI) in 15 pedophilic patients and 15 healthy controls.

Subjects were scanned while erotic or non erotic emotional stimuli were presented via headscreens. A subset of stimuli was presented following an arrow indicating the category of the stimulus.

We here report reduced activity in the hypothalamus and other subcortical regions as well as in the lateral prefrontal cortex (LPFC) in pedophilia during visual-erotic stimulation with pictures of adults. Further, during expectancy of erotic stimuli, pedophilic patients showed decreased activations in the anterior cingulate (ACC). Differential activations during emotional processing were found in the medial prefrontal cortex and hippocampus.

In contrast these differences were not reflected by obtained self ratings of erotic and emotional arousal when compared between patients and controls. However, neural activity in the LPFC significantly correlated with clinical measures of pedophilia as obtained by standardised scores.

Our results demonstrate, for the first time, neural correlates of the lack of sexual interest in pedophilic patients towards adults.