

F012 - The neural correlates of hedonic and eudaimonic happiness: An fMRI study

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AIMS: From Aristotle to Positive Psychology a distinction between two kinds of happiness has been proposed. Hedonia corresponds to a state of pleasure, whereas eudaimonia refers to the sense of meaningfulness and engagement in life. Affective neuroscience has made substantial progress in understanding the neural underpinnings of hedonic happiness. Conversely, the neural correlates of eudaimonia remain largely uncovered, hence future studies are needed in this direction.

This functional magnetic resonance imaging (fMRI) study is the first to explicitly examine the neural correlates of both hedonic and eudaimonic happiness through a mood induction procedure.

METHODS: Seventeen students (7 males, 10 females; mean age = 25.06 ± 5.05) performed a mental imagery task during fMRI. Participants were cued with short sentences referring to three classes of life events: Hedonic (HE), eudaimonic (EE) and neutral (NE) events. We followed a block-design experimental protocol randomly alternating the three event categories.

RESULTS: Compared to NE, HE and EE activated a network of frontal, temporal and parietal regions, as well as subcortical structures. In the HE/EE comparison, HE showed enhanced activity in frontal medial/middle regions and anterior cingulate cortex, which are typically implicated in self-referential processing and reward representation. By contrast, EE showed increased activity in the right precentral

gyrus, an area associated with action planning, cognitive reappraisal, future thinking, and autobiographical recall.

CONCLUSIONS: Results suggest that hedonic and eudaimonic happy events are associated with relatively differentiated brain circuits underlying distinct functions. Future studies are needed to replicate the current findings in older samples.