

氏名	大場 健太郎
所属	人間健康科学研究科 人間健康科学専攻
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論文審査委員	主査 教授 菊池 吉晃 委員 教授 木下 正信 委員 教授 渡邊 賢

【論文の内容の要旨】

People sometimes experience an emotional state known as ‘nostalgia’, which involves experiencing predominantly positive emotions while remembering autobiographical events. Nostalgia is thought to play an important role in psychological resilience. Previous neuroimaging studies have shown involvement of memory and reward systems in such experiences. However, it remains unclear how these two systems are collaboratively involved with nostalgia experiences. Here, we conducted a functional magnetic resonance imaging study of healthy females to investigate the relationship between memory-reward co-activation and nostalgia, using childhood-related visual stimuli. Moreover, we examined the factors constituting nostalgia and their neural correlates. We confirmed the presence of nostalgia-related activity in both memory and reward systems, including the hippocampus (HPC), substantia nigra/ventral tegmental area (SN/VTA), and ventral striatum (VS). We also found significant HPC-VS co-activation, with its strength correlating with individual ‘nostalgia tendencies’. Factor analyses showed that two dimensions underlie nostalgia: Emotional and personal significance and Chronological remoteness, with the former correlating with caudal SN/VTA and left anterior HPC activity, and the latter correlating with rostral SN/VTA activity. These findings demonstrate the cooperative activity of memory and reward systems, where each system has a specific role in the construction of the factors that underlie the experience of nostalgia.