



## The Jacobs Center Research Seminar Series

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## Reward Anticipation and Episodic Memory in Middle Childhood

Anticipation of reward has been shown to enhance incidental encoding of episodic memories. Neuroimaging evidence suggests that this memory-enhancement effect is partly driven by modulated interactions between the medial temporal lobe and the dopaminergic midbrain. These brain regions and the corresponding memory and reward systems are susceptible to stressful experience and generally undergo developmental changes, yet research in children is lacking. Disadvantaged socioeconomic background is commonly associated with higher stress experiences in children. We aimed at replicating the effect of reward anticipation-mediated memory enhancement reported in adults with 6 and 7-year-old children, and test for modulations of the effect

with family income, parent's perceived stress, and child's hair cortisol using an fMRI design. Consistent with previous research, reward anticipation was related to activations in striatum, thalamus, and supplementary motor area and enhanced episodic memory performance. Interestingly, this memory enhancement was particularly evident in children from lower income families. However, no such modulatory effects were found for parental stress or child's hair cortisol. Our results extend research on reward anticipation and memory interactions to a younger age group and point to differential effects driven by family income that deserve further investigation.

**Friday, March 4, 2022, 10:00 h**

Online via Zoom:

<https://uzh.zoom.us/j/65494925495?pwd=eXVSQXhsbmZFenRmUVFhYkxYZ1RxQT09>

Individual meetings with Dr. Laura Meine are available, if interested please contact Ines Florin at [ines.florin@jacobscenter.uzh.ch](mailto:ines.florin@jacobscenter.uzh.ch)