

Abstract

The Diploma thesis is concerned with the human episodic-like memory and its changes during the course of healthy ageing. Episodic memory represents a memory of specific events and their spatiotemporal relations, involving conscious retrieval and mental time travel. As a testable analogy in animals, a concept of episodic-like memory has been suggested and defined as a memory of spatiotemporal location of a certain event in the past (“what-where-when”).

Firstly, we focused on a methodological comparison of standard psychological tests of episodic memory and a novel non-verbal computer-based Episodic-Like Memory Test (EMT) with several variants of varying difficulty, capable of discerning the memory for pictures, their sequence and position (Vlček et al., 2009). The second goal of our study was to demonstrate the applicability of the concept of episodic-like memory (“what-where-when”) as a model in the testing of human episodic memory. Compared with other tests of episodic memory, EMT test does not depend on the verbalization of content. Contrasting the results obtained from EMT and other standard tests was, therefore, of interest.

The results from the EMT test were compared across three age cohorts (N = 58; young, middle-aged, aged) of healthy volunteers. In the spatial domain of episodic-like memory, the results in the young subgroup significantly differed when compared with both middle-aged subjects and old participants. However, no significant difference was found between middle-aged and old subjects. At the same time, the results of other tests correlated with the error rate in the position parameter rather than in the sequence. Consequently, our data suggest that the error rate in the position parameter, a correlate of the spatial domain of episodic-like memory, may predict cognitive deficit more reliably than the error rate in the sequence parameter.

Keywords:

episodic memory, aging, episodic-like memory, Mild Cognitive Impairment