Memory encoding for new information, not autobiographical memory load, predicts age-related acceleration in subjective time passage over the last decade

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The widely observed phenomenon that the perceived speed of time passage over the past decade increases with chronological age has been consistently replicated across several studies in different countries. The present study aimed to investigate potential mechanisms underlying this effect, examining the role of autobiographical memory and cognitive functioning. A sample of 120 individuals aged 20-91 was assessed on subjective time perception for the preceding year and decade, the quantity and significance of autobiographical memories from those periods, and overall cognitive status. Results confirmed the age-related increase in perceived temporal acceleration over the past decade. However, no significant association was found between perceived time passage and the number or subjective value of retrieved autobiographical memories. Contrary to prevailing assumptions, older adults reported more vivid and personally meaningful recollections. Instead, reduced cognitive functioning, and specifically lower ability to form new memories as assessed through delayed memory recall, emerged as a significant mediator of accelerated time perception with age. Findings suggest that age-related cognitive decline leading to reduced ability to encode novel memories, rather than diminished autobiographical memory content, is a critical factor in the subjective experience of time compression in older adults.

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