

# Age-dependent attentional style and arousal regulate the reportability of spontaneous mental states

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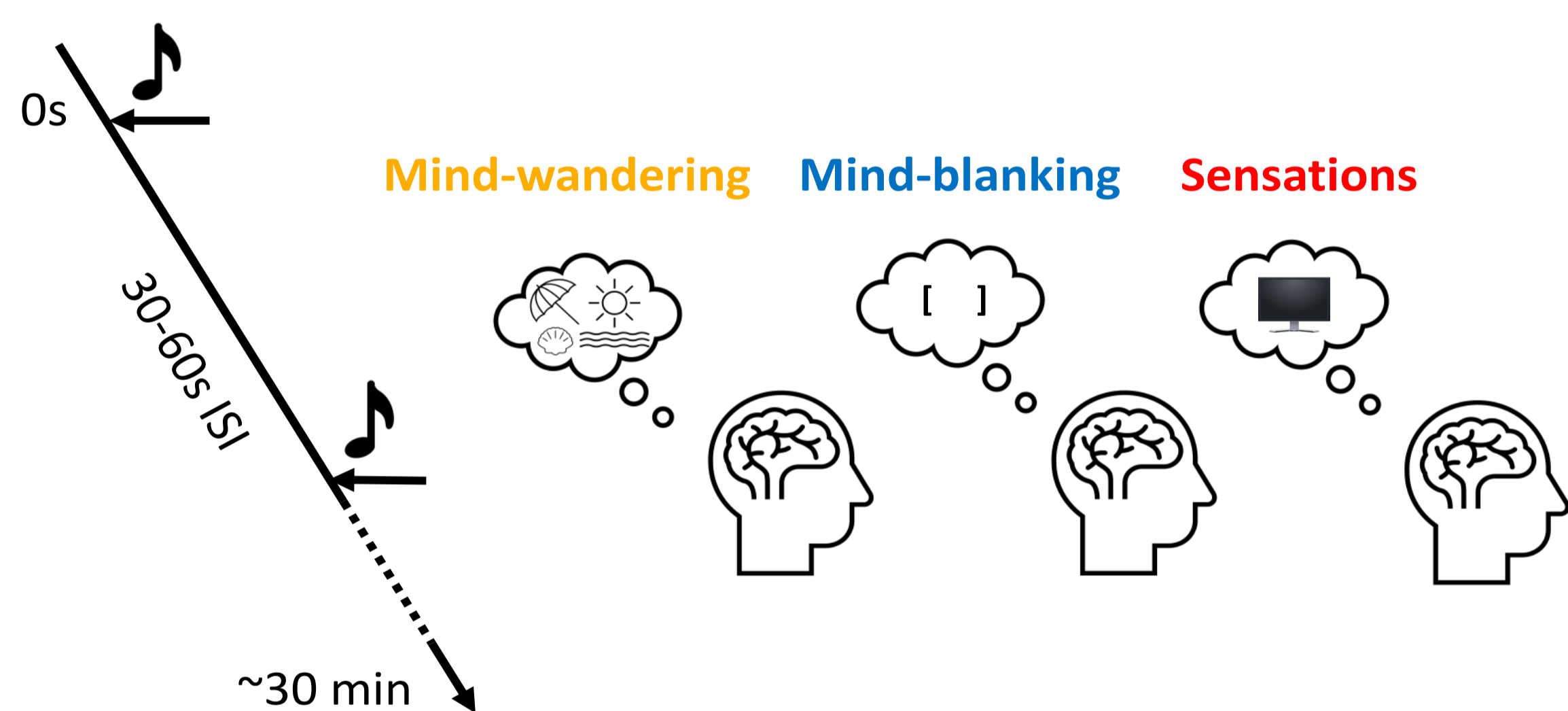
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## Introduction

- **Spontaneous thinking** is regulated by attention and arousal
- **Age** affects attention, arousal and spontaneous thinking
- **Question:** How is the reportability of spontaneous mental states regulated by age-dependent attentional resources and arousal?
- **Mind-wandering (MW) vs. Mind-blanking (MB):** rich or empty?
- **Attention vs. Arousal:** independent or interacting?
- **Young vs. Senior:** shared or different mechanisms?
- **Hypotheses:** We expect that seniors show:
  - fewer MW than young due to a more focused attentional style
  - more MB than young due to a lower arousal level
  - an interaction between attention and arousal

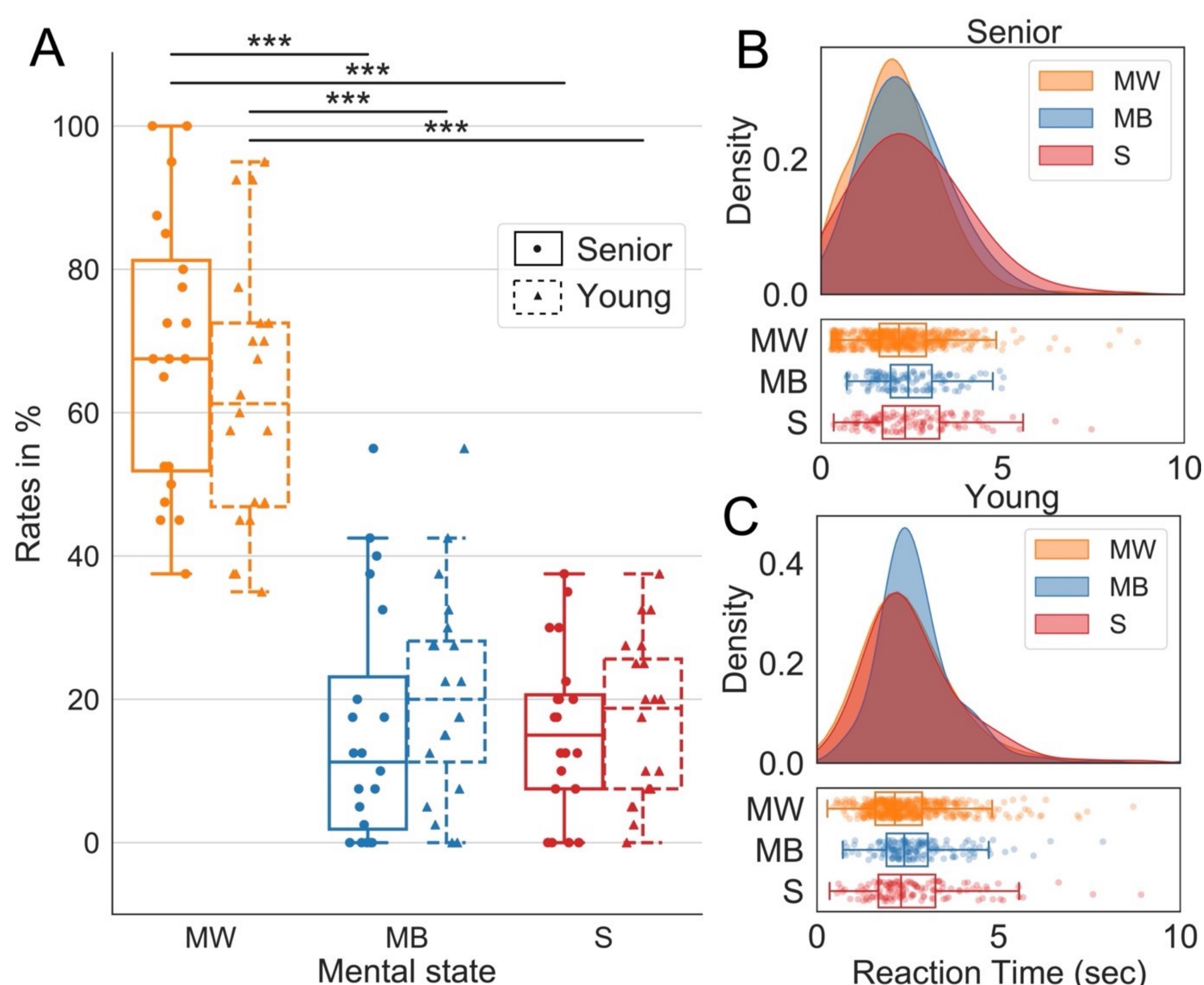
## Methods

- **Participants:** 20 seniors (69.3±3.1) vs. 20 young (25.4±2.4)
- **Thought-sampling task:** occurrence rate and reaction times
- **Attentional Style Questionnaire:** lower score = better focus
- **Physiological arousal:** pupil size recorded at 120Hz



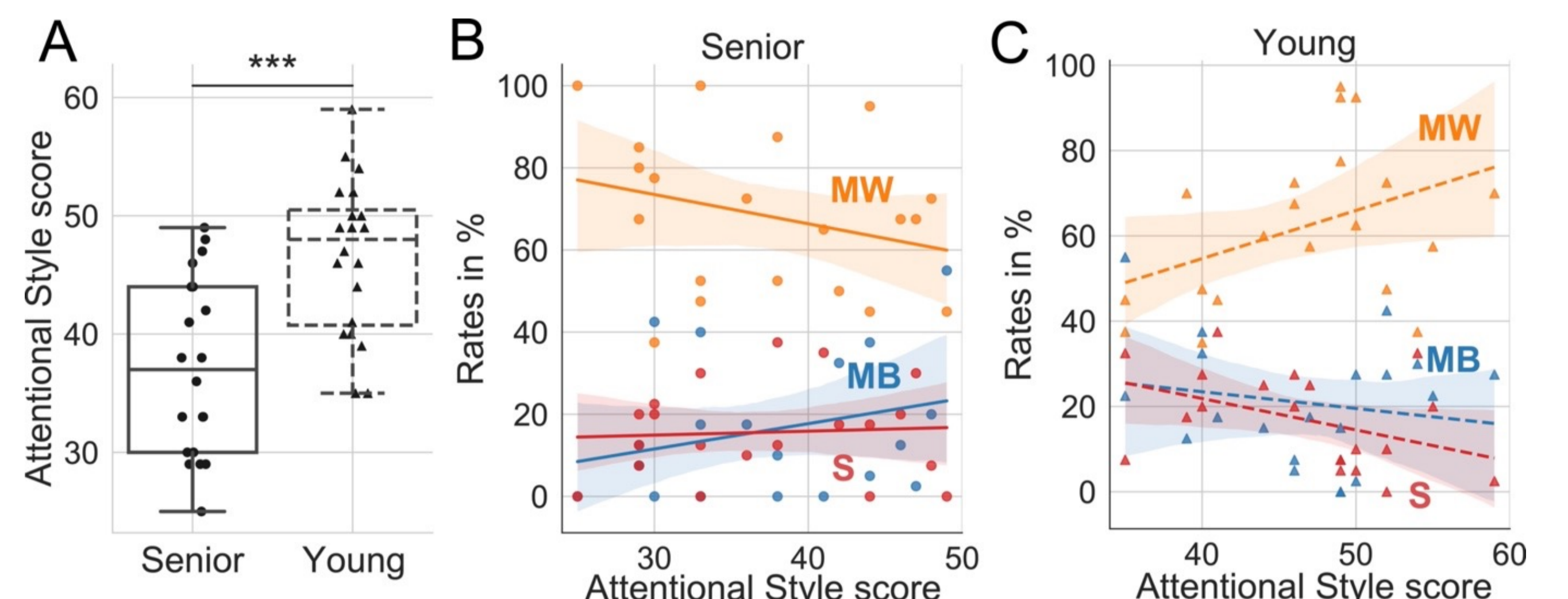
## Results

- **Behavioral profile:** Spontaneous mental states at rest are reported similarly in both age groups

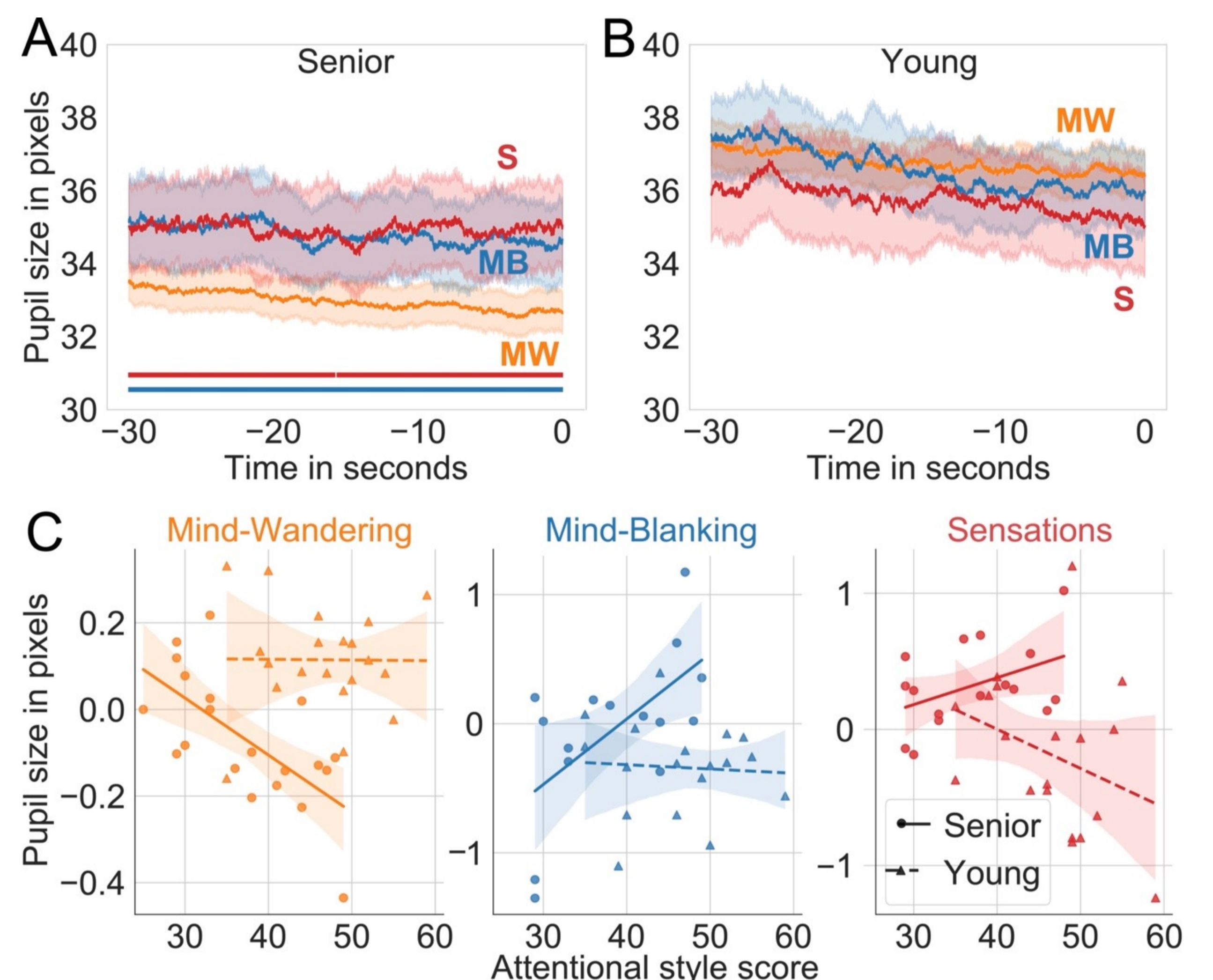


## Results

- **Attentional style:** Age reverses the effect of attentional style on mental state reportability



- **Arousal:** The regulation of mental state reportability by arousal depends on attentional style only in seniors



## Discussion

- **Mental state reportability:** Mind-Wandering predominates over Mind-Blanking across age (Ward & Wegner, 2013; Andrillon et al., 2021).
- **Attentional style:** Seniors with better attentional focus would voluntarily engage into MW, while MW in more distracted young would be unintentional (Moran et al, 2021; Seli et al., 2017, 2021).
- **Arousal:** Intentional MW would be more difficult in seniors when both attentional focus and arousal are low (Gyurkovics et al., 2018). MB in seniors would result from behavioral volatility when attentional focus is low and arousal is high (Andrillon et al., 2019).

## References

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