



INTRODUCTION

Feeling-of-knowing (FOK) = ability to predict future recognition of unrecalable information

Studies suggest FOK accuracy on a semantic memory task (sFOK) is **preserved** with age. Research on episodic FOK (eFOK) is more equivocal: some studies suggest an **impairment in eFOK accuracy** in aging but this result has not always been supported. ^[1,2]

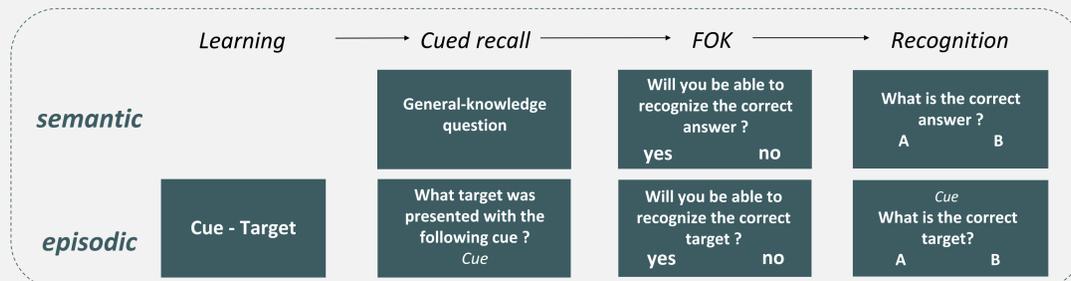


Figure 1: Classical FOK paradigm ^[3].

According to the memory-constraint hypothesis and other work^[4,5], the deficit observed in some studies in eFOK might be a direct consequence of **decrease in episodic memory abilities** associated with aging^[6].

Goals

- Provide a global review of performance in sFOK and eFOK metacognitive sensitivity in aging
- Assess the contribution of memory performance to age-related eFOK differences

METHOD

Meta-analyses were conducted following the PRISMA guidelines and recommendations

17 published papers selected / 20 experiments

13 eFOK / 3 sFOK / 4 eFOK + sFOK

1021 older adults (OA) and 882 young adults (YA)

4 analyses (multilevel meta-analytic models):

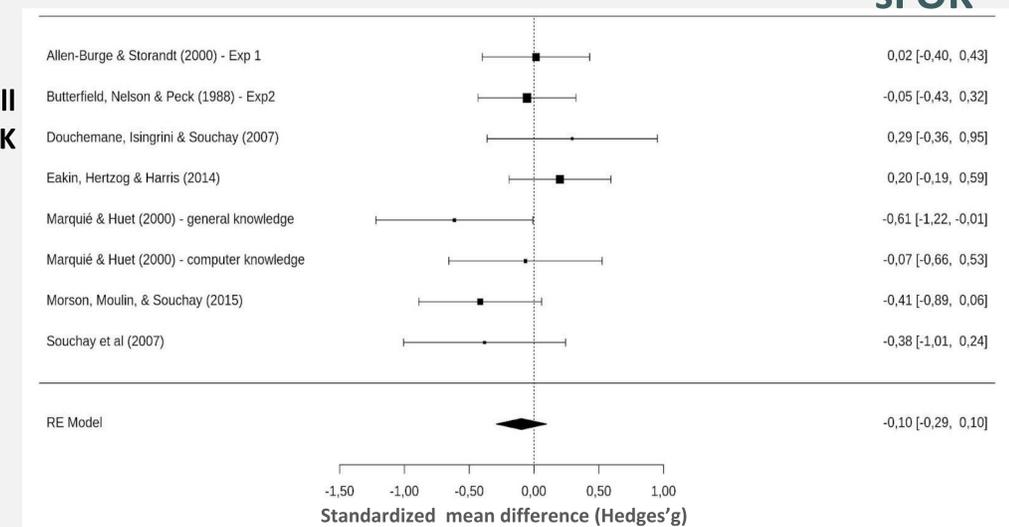
- 1 Overall effect-size of a difference between YA and OA on sFOK
- 2 Overall effect-size of a difference between YA and OA on eFOK
- 3 Effect-size of the difference on eFOK with **recall as a moderator**
- 4 Effect-size of the difference on eFOK with **recognition as a moderator**

Mesasure of interest = effect size of the difference between age groups on **metacognitive sensitivity** (measured with γ correlation)

RESULTS

- 1 Confidence interval of the **overall estimated effect** of age on **sFOK** overlaps with 0

→ equivalent gamma correlations for YA and OA



eFOK

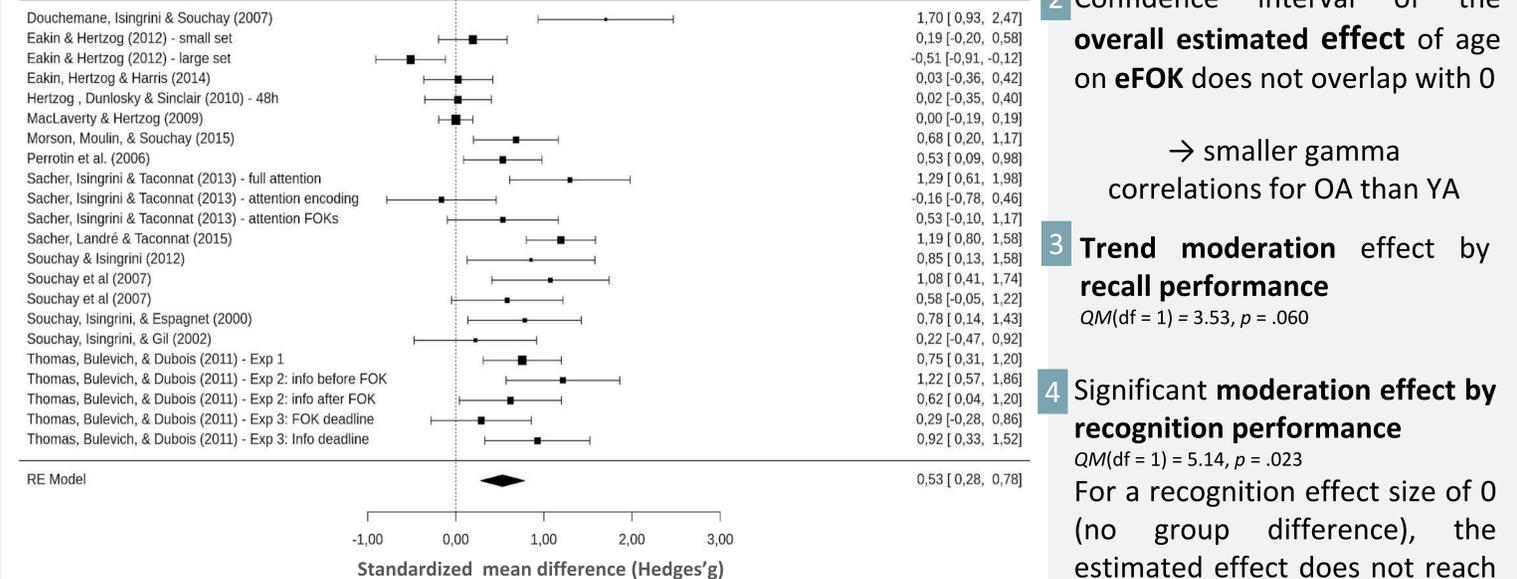


Figure 2 : General age effect-size on s FOK (top) and eFOK (bottom)

- 2 Confidence interval of the **overall estimated effect** of age on **eFOK** does not overlap with 0

→ smaller gamma correlations for OA than YA

- 3 Trend moderation effect by **recall performance**
 $QM(df = 1) = 3.53, p = .060$

- 4 Significant moderation effect by **recognition performance**
 $QM(df = 1) = 5.14, p = .023$
For a recognition effect size of 0 (no group difference), the estimated effect does not reach significance (estimate = -0.24, $p = 0.514$)

CONCLUSION

- Overall **preservation of sFOK sensitivity** in aging
- Overall age-related **decline of eFOK sensitivity** which is only slightly reduced when recall performance is controlled for and significantly **reduced** when **recognition performance** is controlled for
 - No evidence for an age effect on eFOK when no group difference on recognition
- **Decrease in eFOK sensitivity in aging as a consequence of memory decline or potential confounds due to the sensitivity measure used**