

Bilateral Shifts of Eye Movements and Attention in Younger and Older Adults

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INTRODUCTION

There is evidence that making 30 seconds of bilateral eye movements improves memory in strongly right-handed young adults (Christman et al., 2003; Lyle et al. 2008).

Given that attention and eye movements share many overlapping neural mechanisms (de Haan et al., 2008), it is possible that bilateral shifts of covert visual attention may have similarly beneficial effects on memory. [Experiment 1]

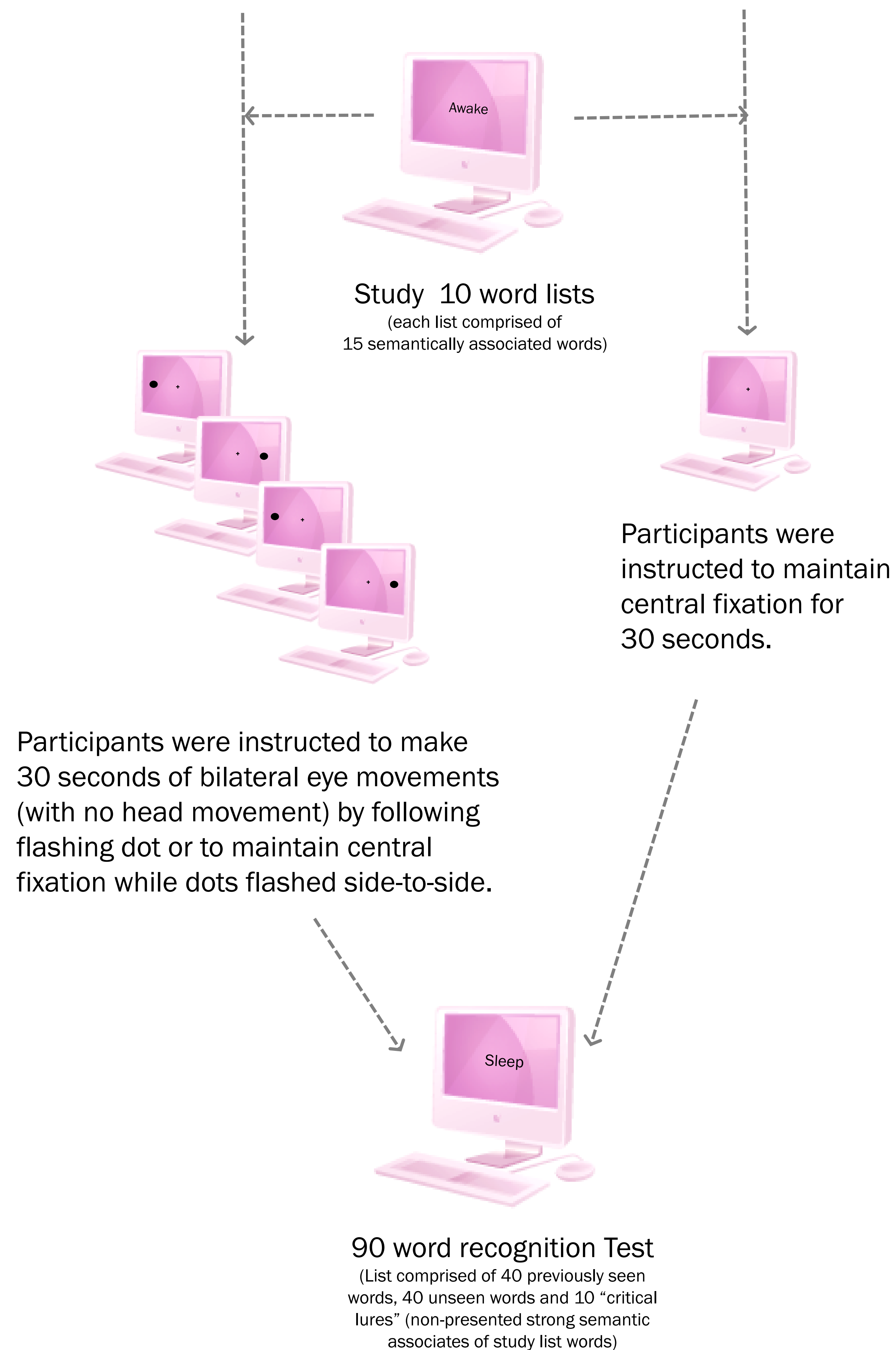
It is unknown whether older adults show a similar memory benefit from making bilateral shifts of attention (either covert or overt) as that observed in younger adults. [Experiment 2]

METHOD

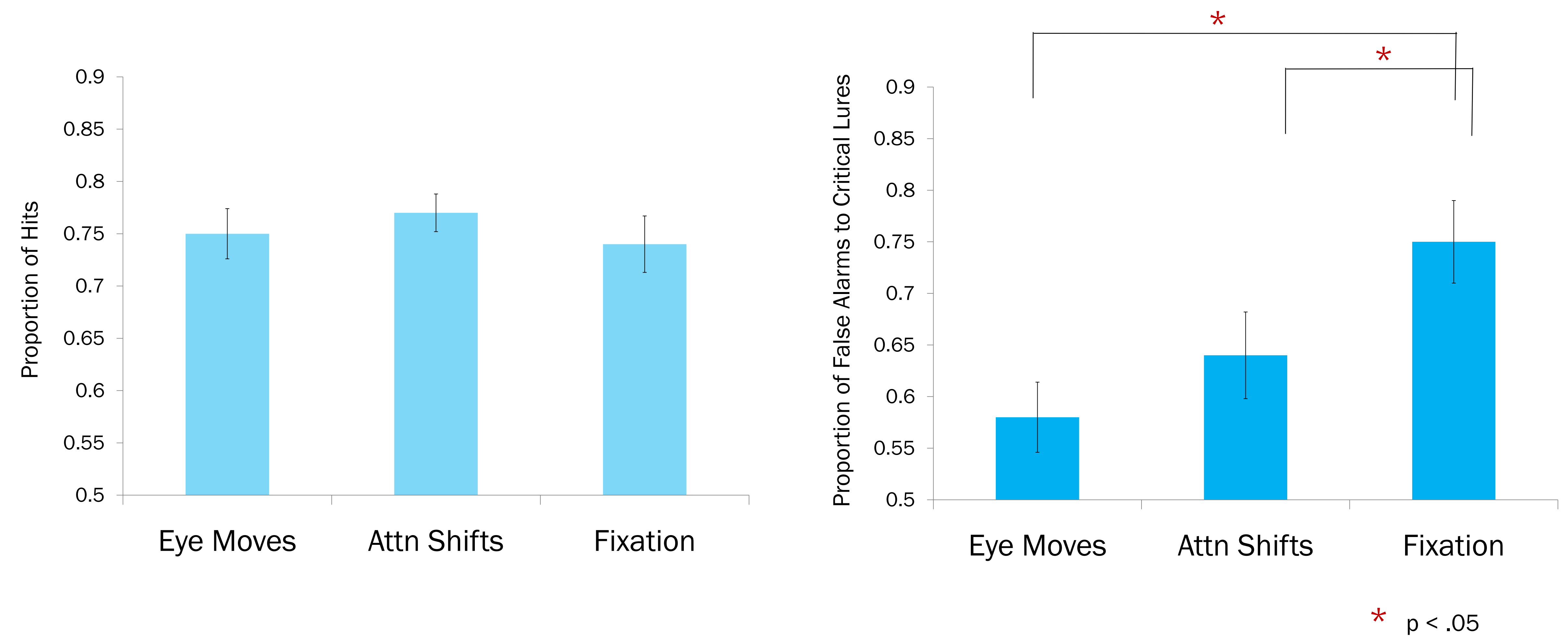
Correct and false recognition were measured on a verbal learning task known to reliably produce false memories (a DRM task).

Three groups each of right-handed younger and older adults:

1. eye movements,
2. shifts of attention
3. control (fixation),



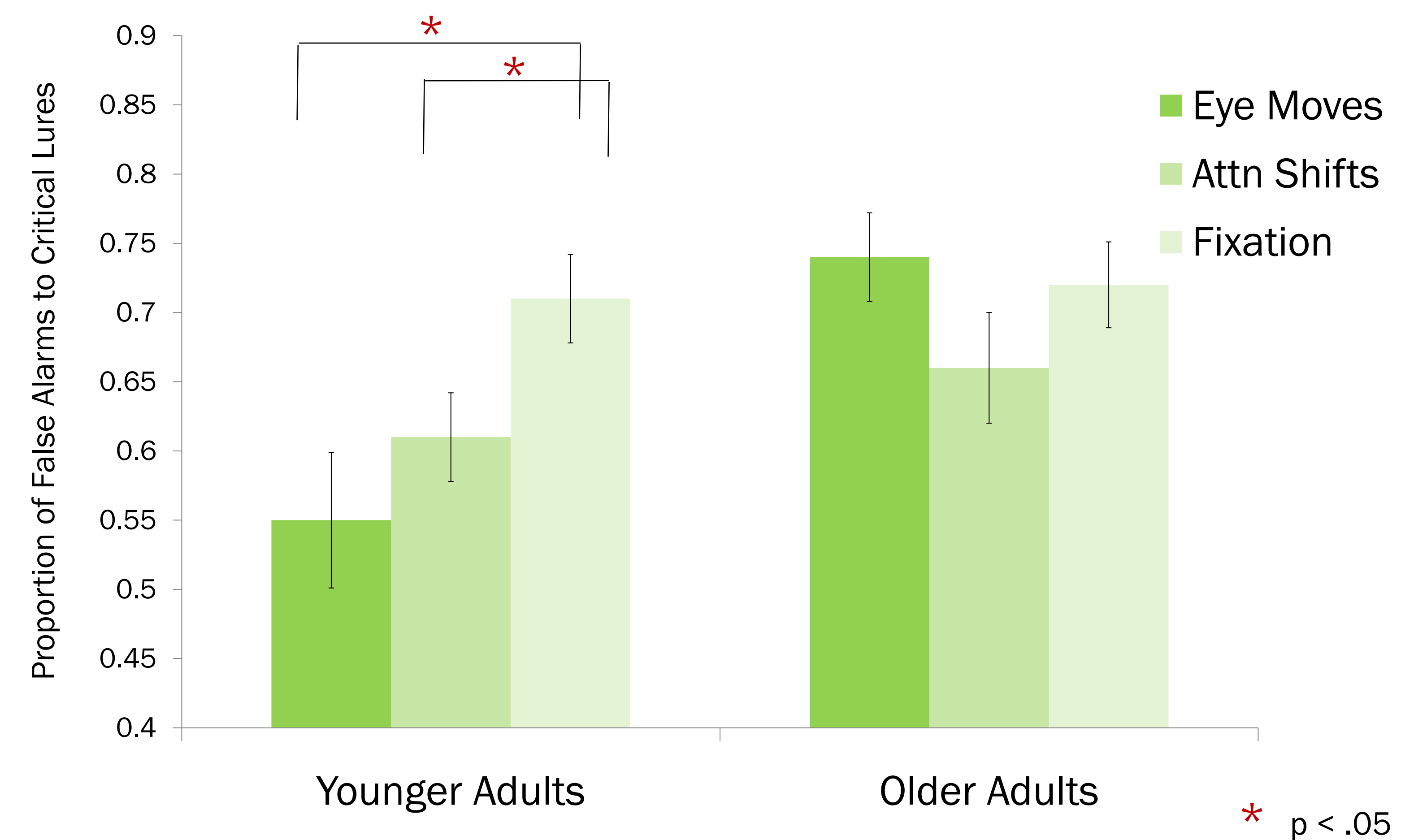
RESULTS – Experiment 1



Conclusion

Both eye movements and attention shifts (made in the absence of eye movements) reduced false recognition of critical non-presented words (critical lures).

RESULTS – Experiment 2



Conclusion

Replication of Experiment 1 – for younger adults, false memory was reduced following both eye movements and shifts of attention.

No memory benefit in the older adult group for either eye movements or shifts of attention.

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