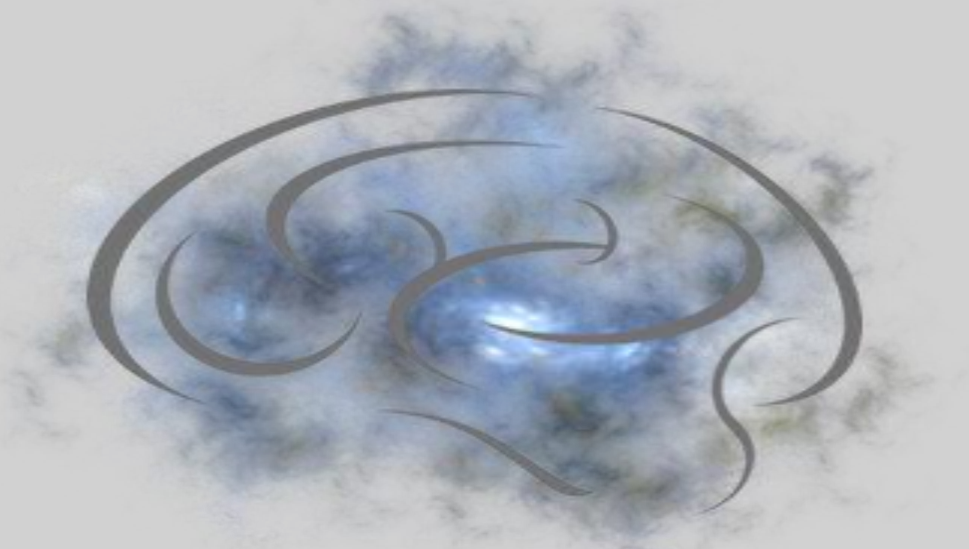
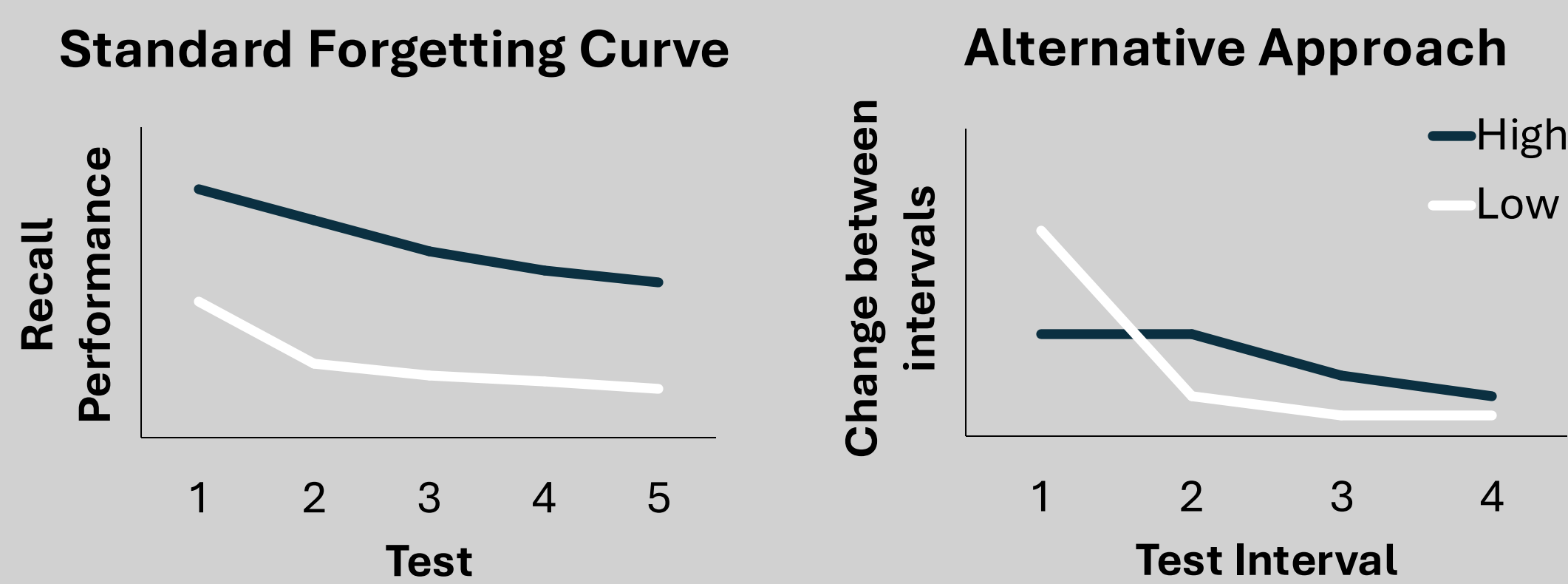




Introduction

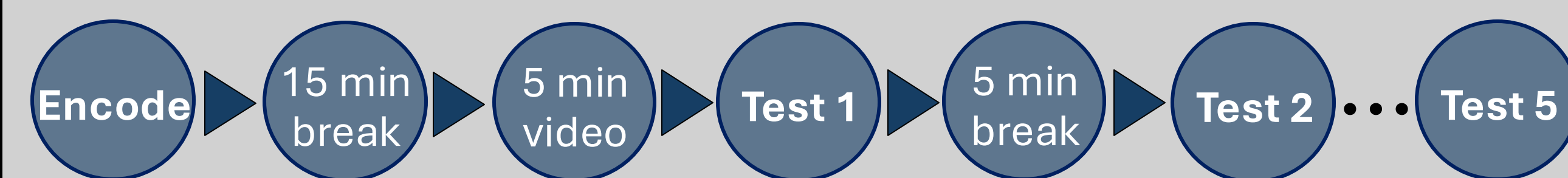
- The relationship between initial learning level and the rate of forgetting has been debated for decades (Slamecka & McElree, 1983; Loftus, 1985; Rivera-Lares et al., 2022)

- Discrepancies between studies could be due to different ways of measuring and analyzing forgetting (Wixted 1990, 2022)



- A replication of most previous findings would show the rate of forgetting to be independent of initial learning when retention performance is analyzed with ANOVA
- The alternative approach predicts that measuring the change in performance between tests should show an interaction, such that material that is poorly learned is forgotten faster than material that is well learned

Method



Encoding



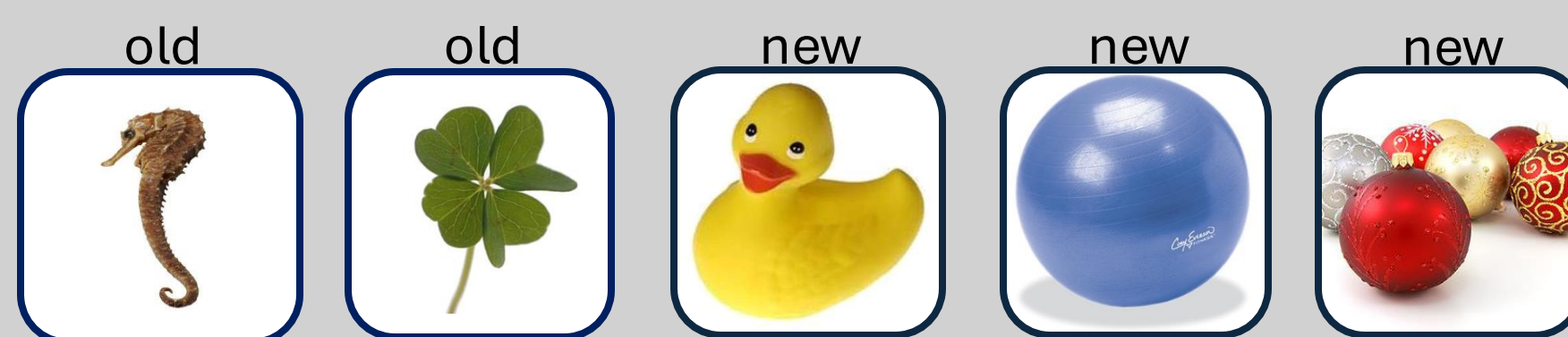
DEEP (1.7 s): Is this found indoors?

SHALLOW (700 ms): Does this have red in it?

Breaks

4 min
video1 min
attention check

Tests

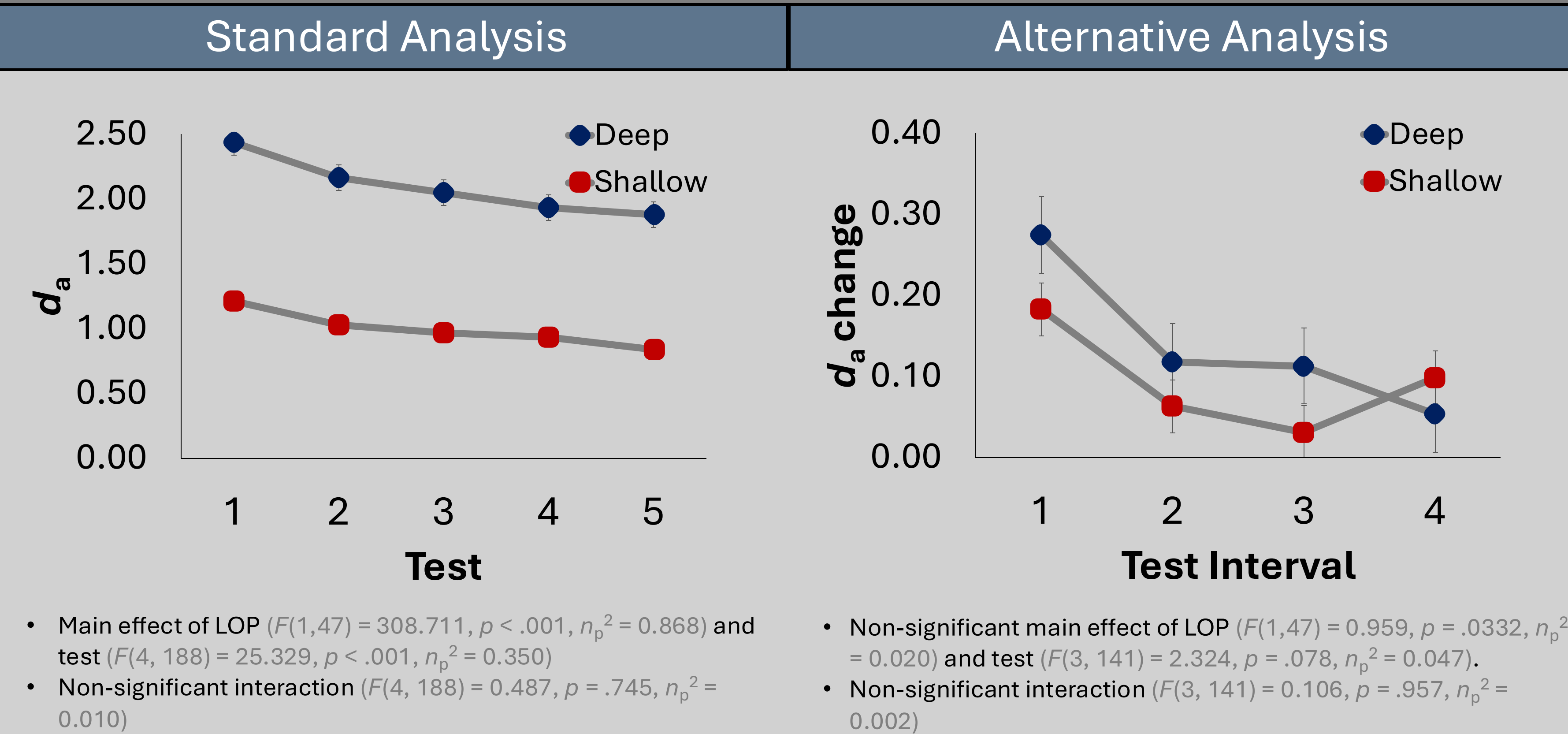


Sure New 1 2 3 4 5 6 Sure Old

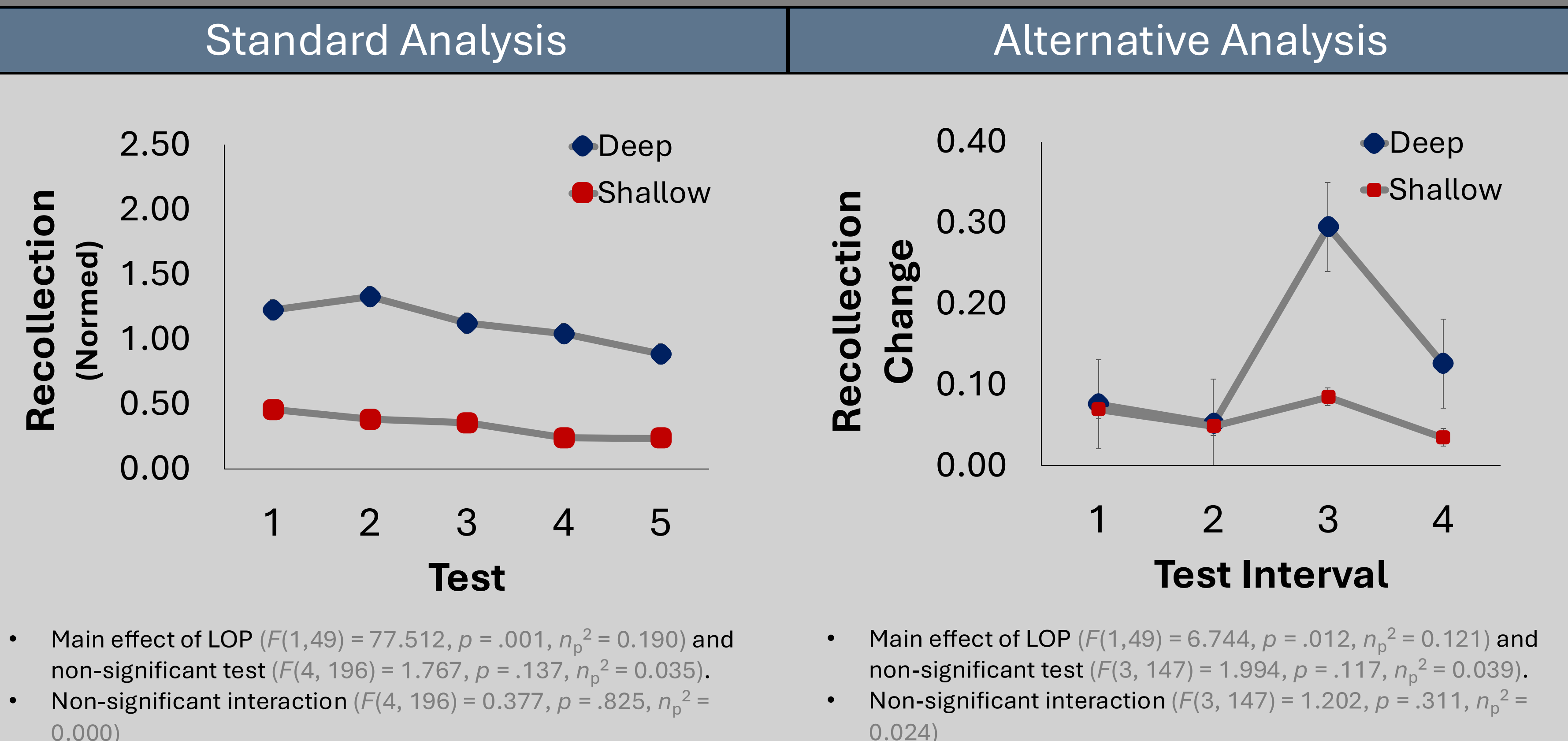
2.5 s response time, 500 ms ISI

n= 50
age = 19.3
66% female

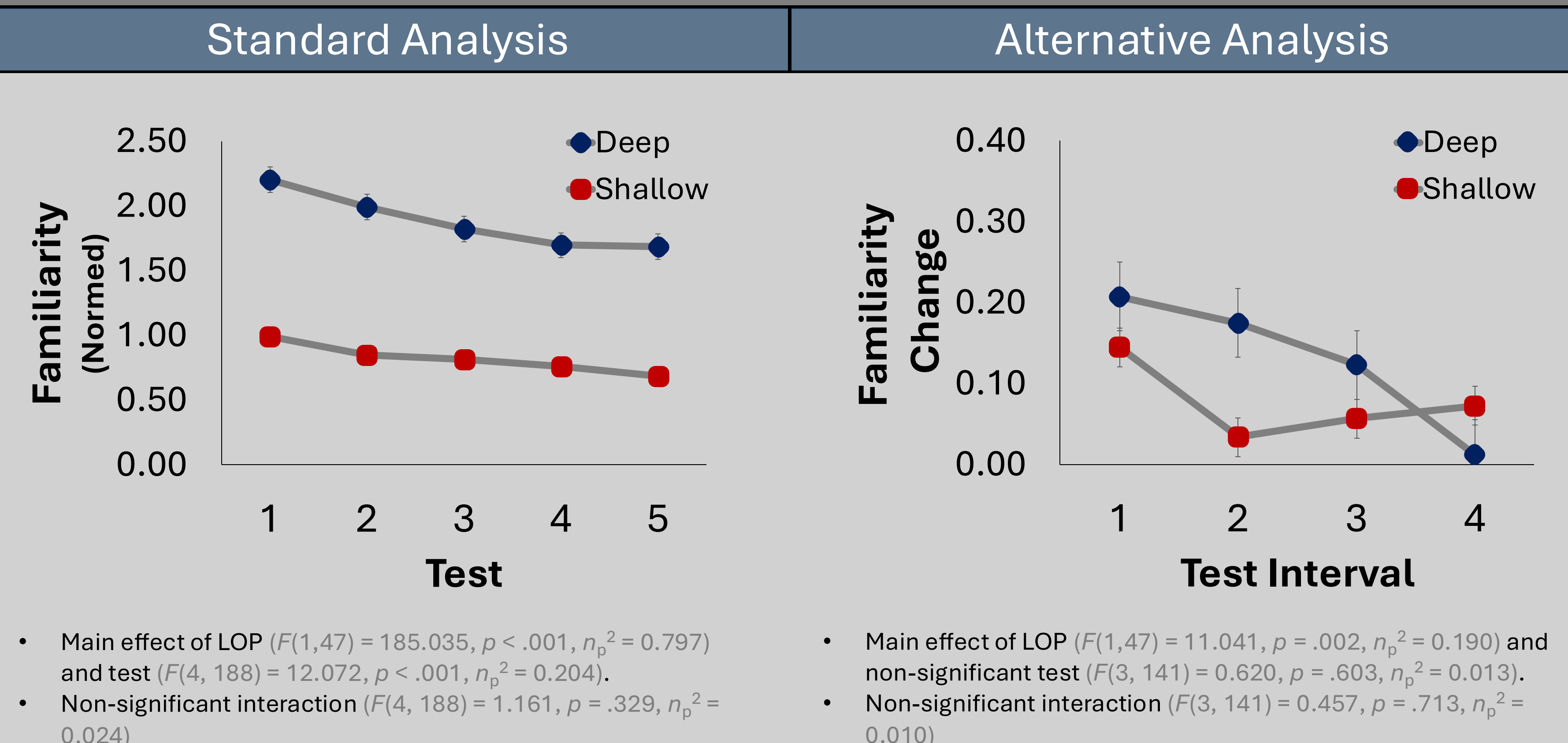
Results

 d_a 

Recollection



Familiarity



Discussion

- Supporting previous research, we found no significant difference in the rate of forgetting for items encoded at different levels of processing with the standard analysis (Slamecka & McElree, 1983; Loftus, 1985; Rivera-Lares et al., 2022)
- In contrast to expectations, the alternative analytic approach did not reveal a significant interaction between LOP condition and test interval (Loftus, 1985)
- Notably, the alternative approach was argued to be the more appropriate way of analyzing forgetting data when using ANOVA (Loftus, 1985; Wixted, 2022). It did not specify reasons for potential differences in learning rates.

Limitations

- Our analysis focuses on discrimination (d_a) as opposed to recall (c.f., Slamecka & McElree, 1983)
- No significant change in forgetting rate between test 1 and test 2 for either LOP condition
- Examines forgetting at short time scale (1.5 hours)

Future Directions

- Test the hypotheses when forgetting is more evident
- Examine the processes involved in forgetting (theoretical development)

References

- Slamecka, N. J., & McElree, B. (1983). Normal forgetting of verbal lists as a function of their degree of learning. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 9(3), 384–397.
- Loftus, G. R. (1985). Evaluating forgetting curves. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 11(2), 397–406.
- Rivera-Lares, K., Logie, R., Baddeley, A., & Della Sala, S. (2022). Rate of forgetting is independent of initial degree of learning. *Memory & Cognition*, 50(8), 1706–1718.
- Wixted, J. T. (1990). Analyzing the empirical course of forgetting. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 16(5), 927–935.
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