

THE FUNCTION OF MID-DAY NAPS ON PRIOR DECLARATIVE LEARNING FOR PRESCHOOL CHILDREN

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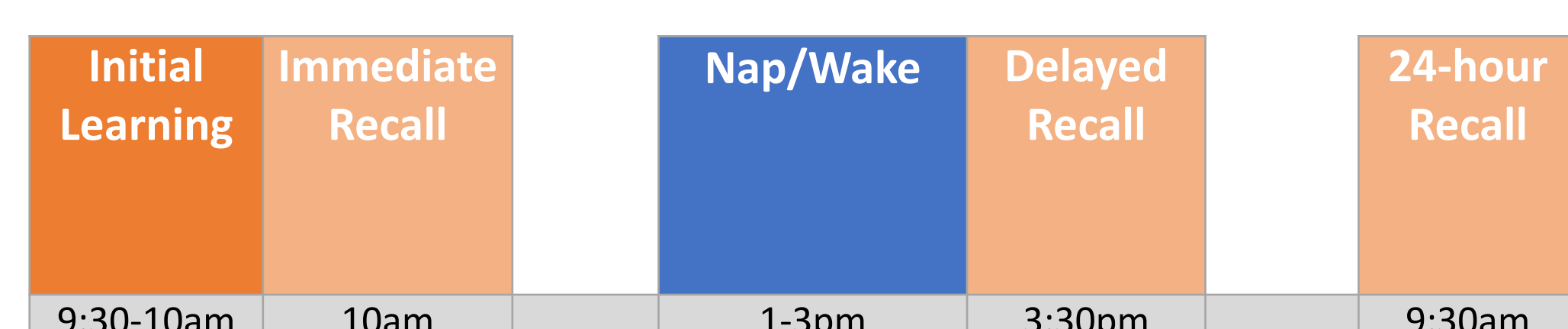
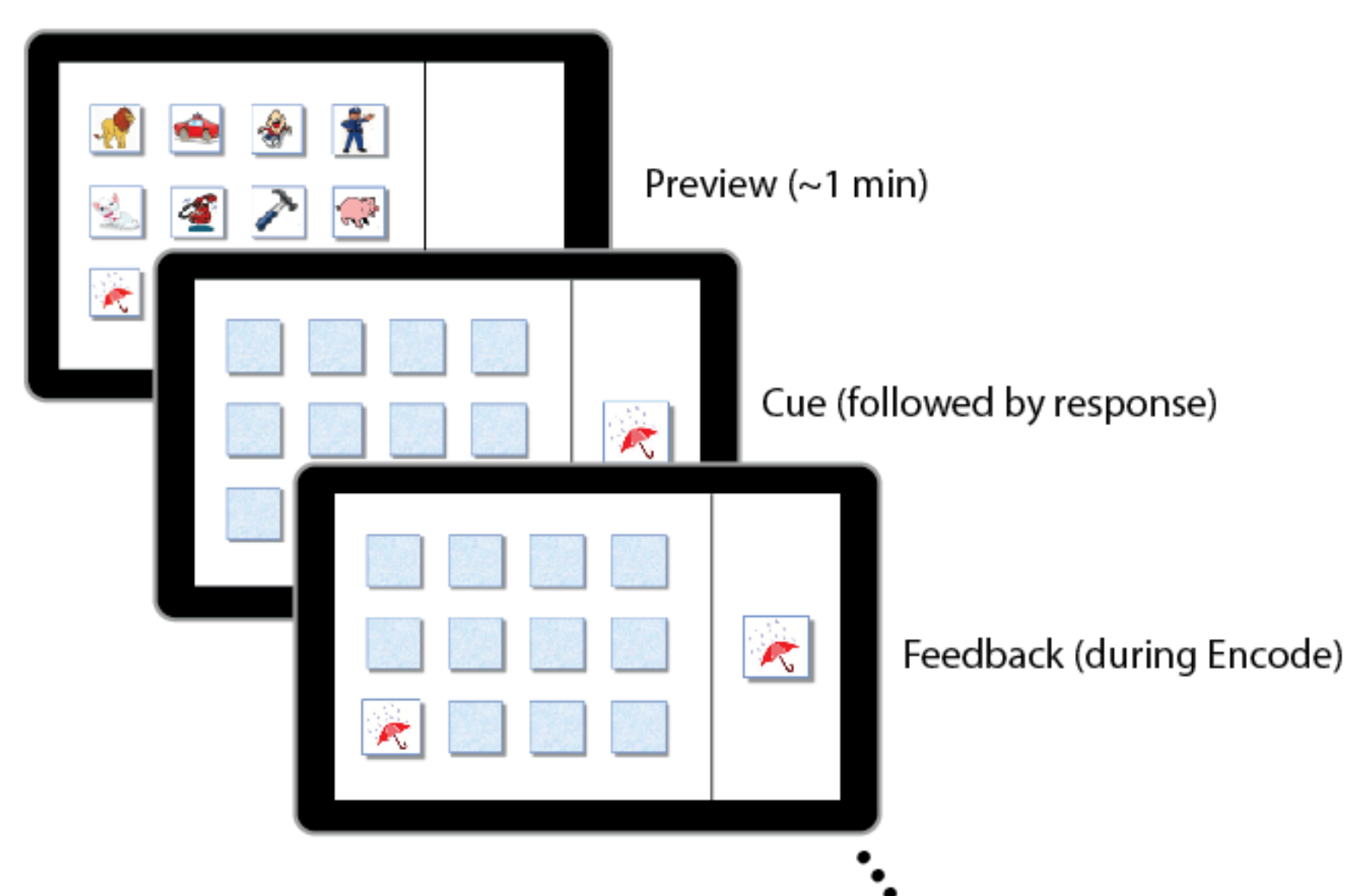
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INTRO

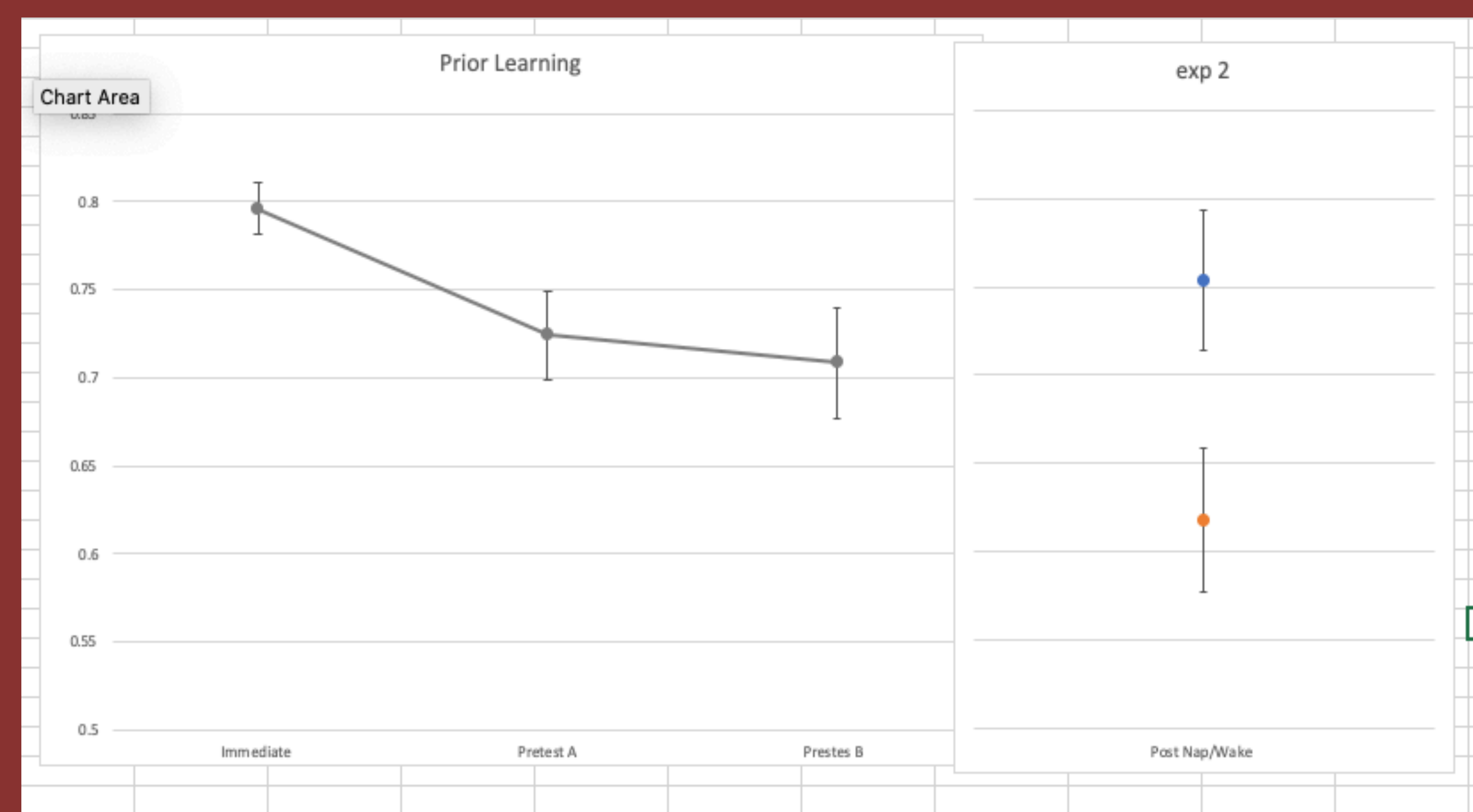
- Naps in preschoolers have been found to benefit declarative learning.
- Intriguingly, these data also suggest that naps may recover memories that may have decayed over wake.
- That is, following an interval with >1hr awake followed by 2 hrs of sleep, performance was unchanged while accuracy declined if the 3hrs were spent awake.
- This study tested the prediction that memories decay over wake following learning and are then recovered by a delayed nap.

METHODS

- Forty-seven preschool-aged children (M age = 51.9 mo, 54.5% female) learned a visuo-spatial memory task in the morning on two separate occasions separated one week apart, where on one occasion they napped and the other they did not.
- Recall was tested immediately after encoding, and after the afternoon nap/wake interval. Additionally, performance was probed either 1hr (pre-test A) or 2hrs (pre-test B) after immediate recall.



Does sleep-dependent memory consolidation rescue memories from decay in early childhood?



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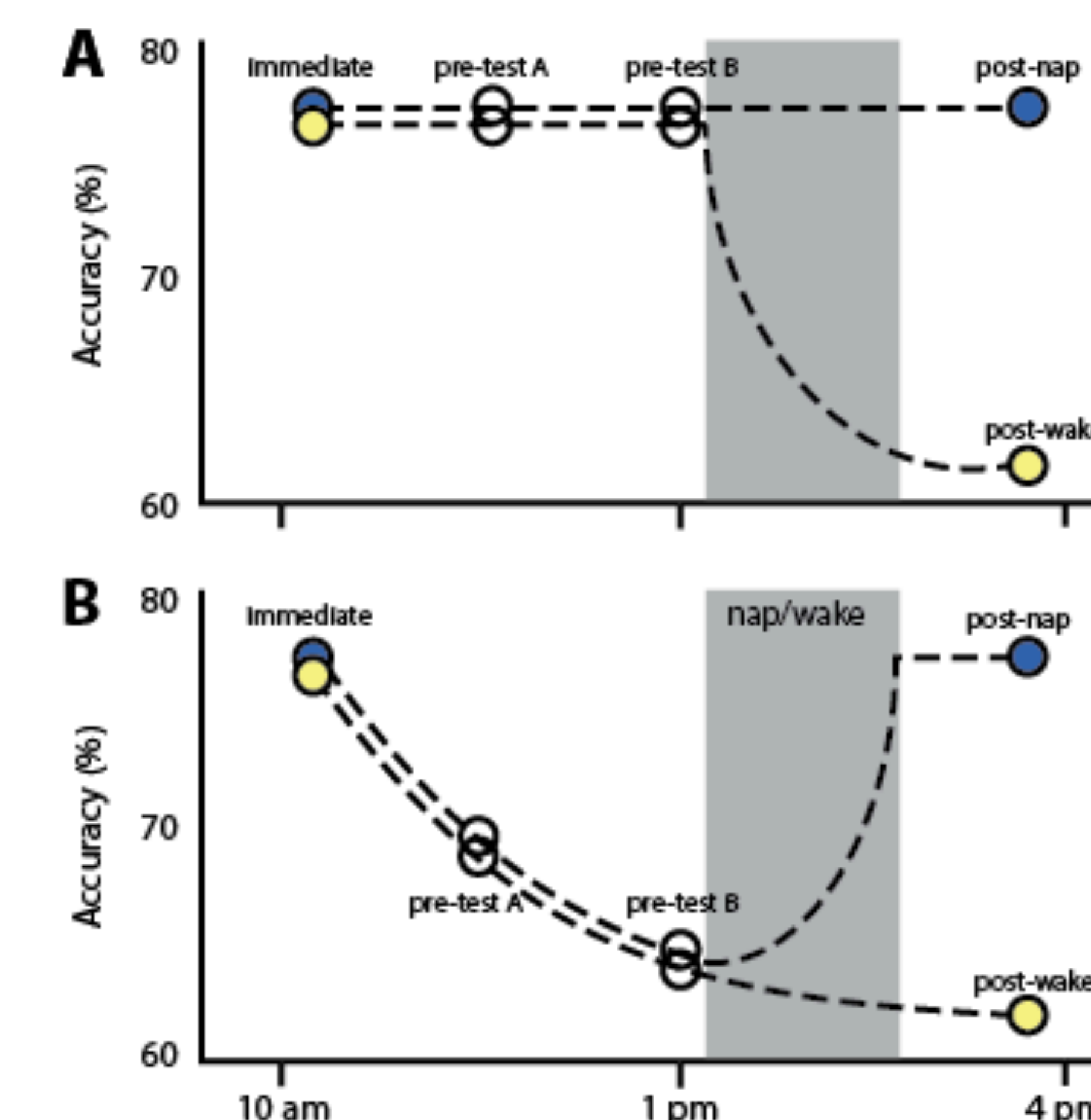


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RESULTS



- Accuracy decayed between immediate recall and pre-test A ($p=0.010$; $n=27$) and between immediate recall and pre-test B ($p=0.005$; $n=20$).
- An additional 6 participants replicated previous findings that learning was protected following the nap and decayed following wake ($p=0.038$).

DISCUSSION

- These results thus far are consistent with predictions that naps can recover memories.
- Whether or not the memories were recovered by an active or a passive role is ongoing.
- Future analysis will include more participants to further explore the role of mid-day naps in preschool aged children.

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