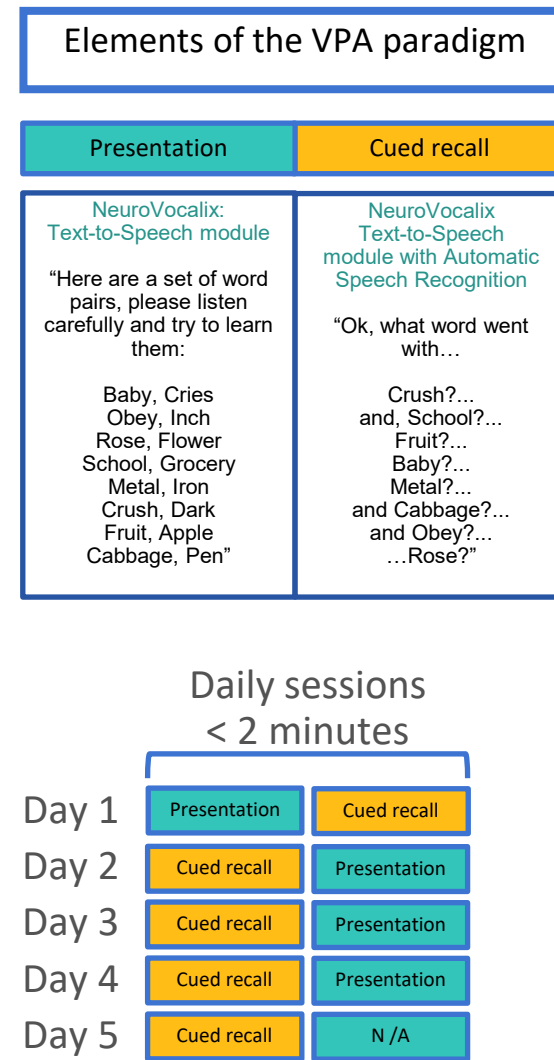


Background

LORE paradigms have shown good sensitivity to prodromal AD pathology (e.g. see Samaroo et al., 2020). We developed a fully automated verbal version of a VPA LORE task using stimulus sets of equivalent memorability, enabling repeated longitudinal testing with low participant burden.



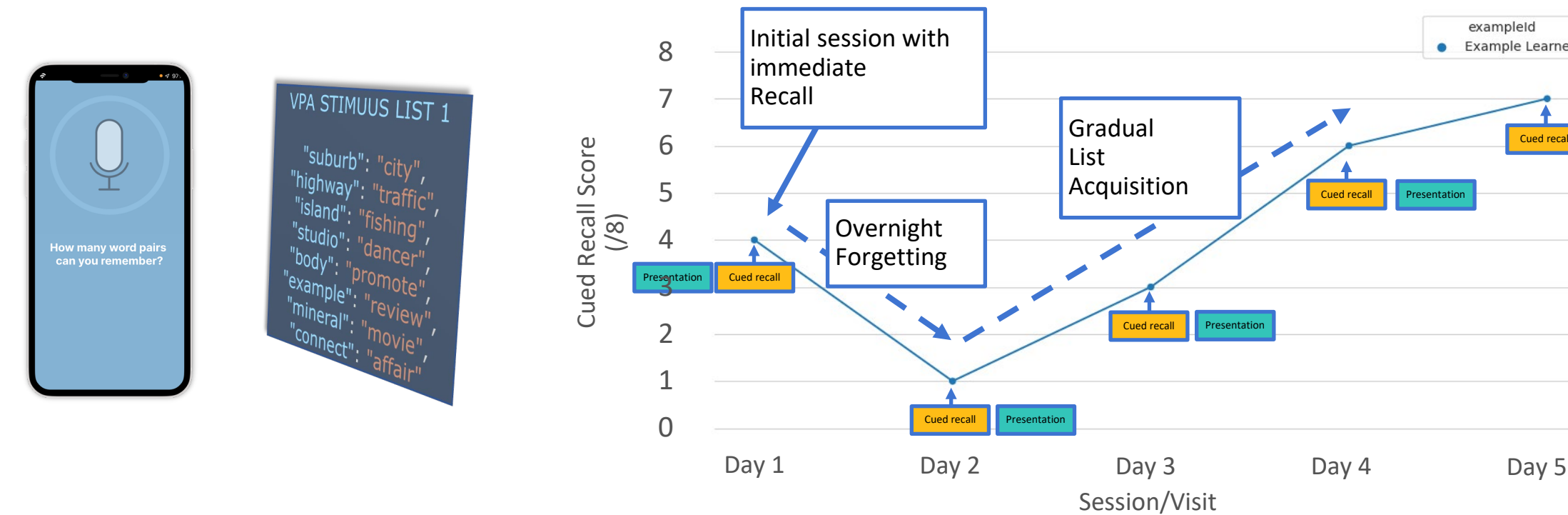
VPA LORE: Learning Verbal Paired Associates Over 5 Days

Task delivery: Automatic Speech Recognition and Text-to-Speech on users' own device

20 participants aged 55+ learned a single set of VPA word-pairs over a 5-day 'Burst' period

Visits have low burden: VPA LORE requires less than 2 minutes in a quiet space

Measures include different types of memory: immediate recall, extinction, gradual LORE



Discussion

This VPA LORE variant shows promising characteristics. Performance at immediate recall conformed to our expectations given our previous validation work, and the gradual learning over a five-day period maintained a good range of performance, suggesting we can expect sensitivity with both low- and high-performing participants.

Conclusion

VPA as a LORE paradigm shows excellent promise as a robust and sensitive cognitive measure.

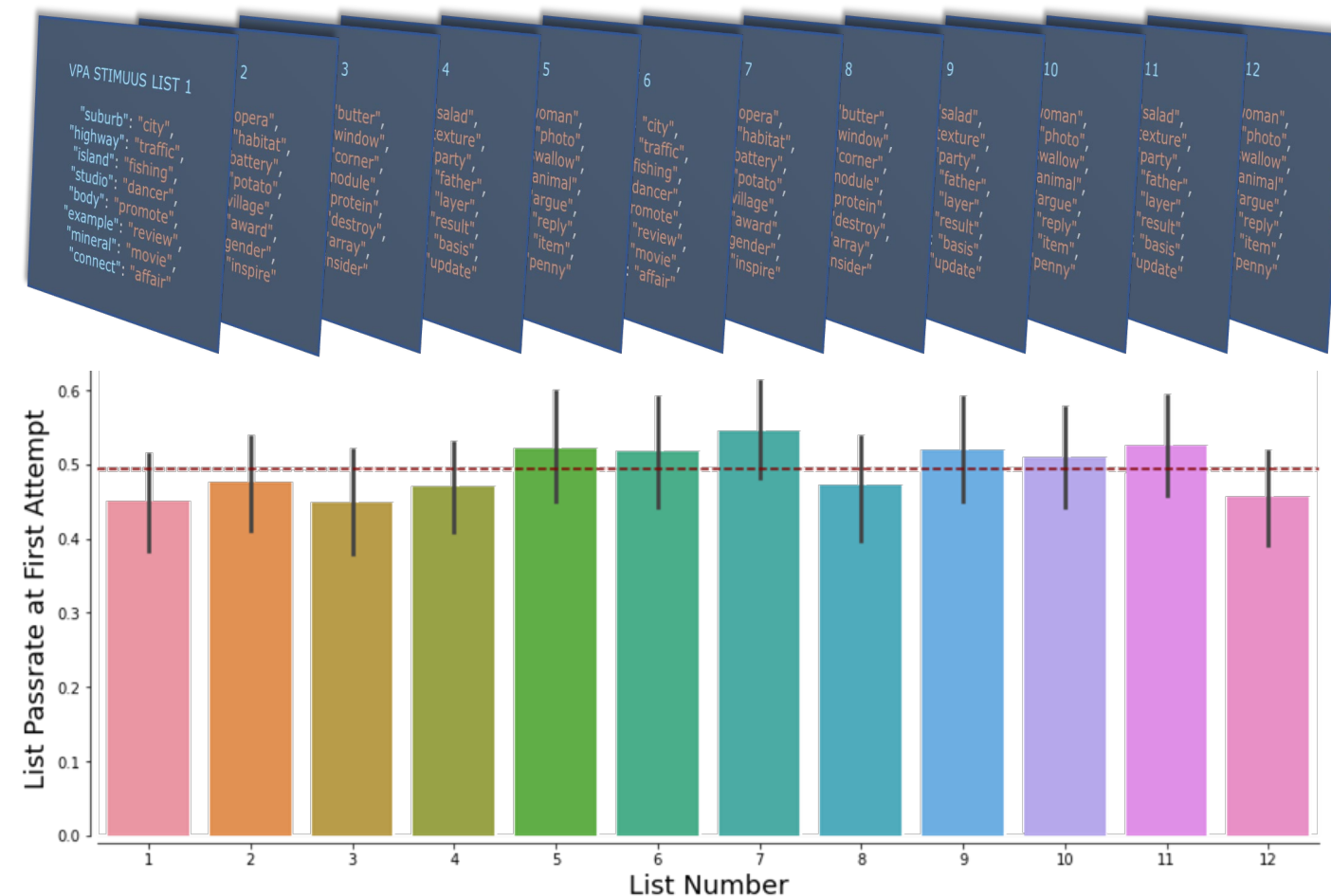
Preliminary data presented here suggest low burden and corresponding high adherence.

Testing over five days allows us to capture cognitive processes related to aspects of recall, forgetting and learning beyond what can be elicited from in clinic assessment.

DOWNLOAD

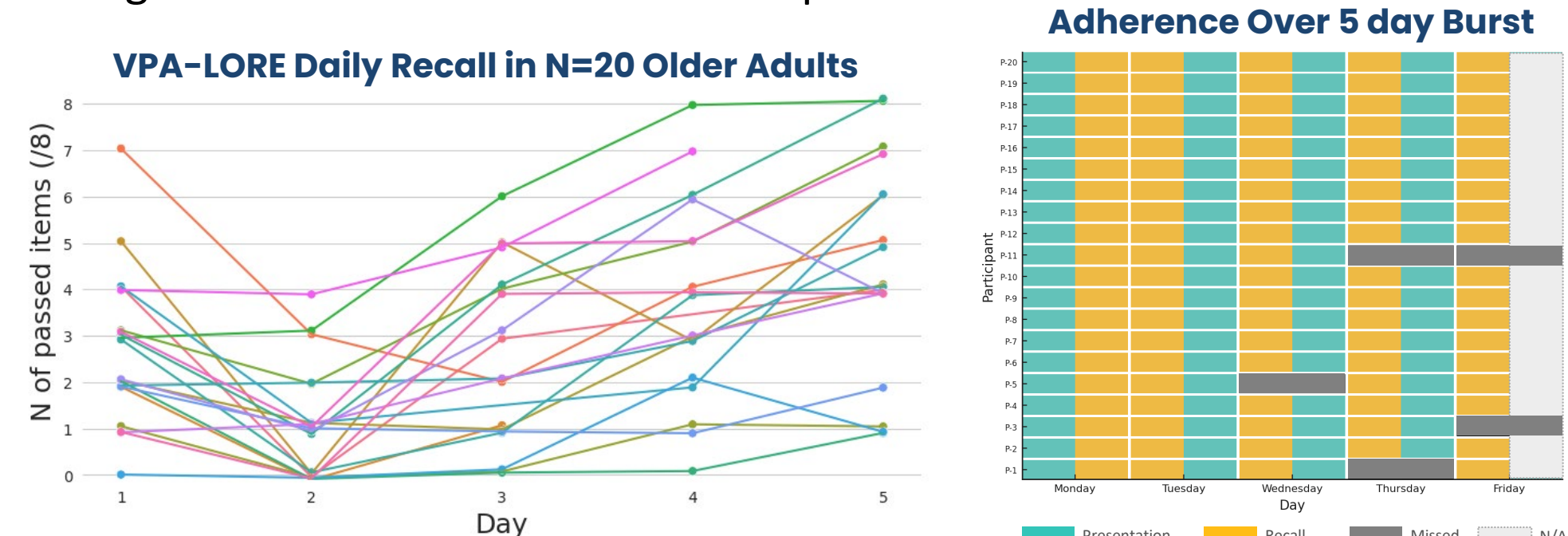


12 Validated VPA Stimuli Sets



Results of Preliminary Study

Our preliminary findings indicate promising task characteristics such as high adherence, positive participant feedback, and robust learning effects with neither ceiling nor floor effects across the sample.



References

Samaroo, A, Amariglio, RE, Burnham, S, et al. Diminished Learning Over Repeated Exposures (LORE) in preclinical Alzheimer's disease. *Alzheimer's Dement.* 2020; 12: 1– 10. <https://doi.org/10.1002/dad2.12132>